

THE KANSAS INDUSTRIALIST

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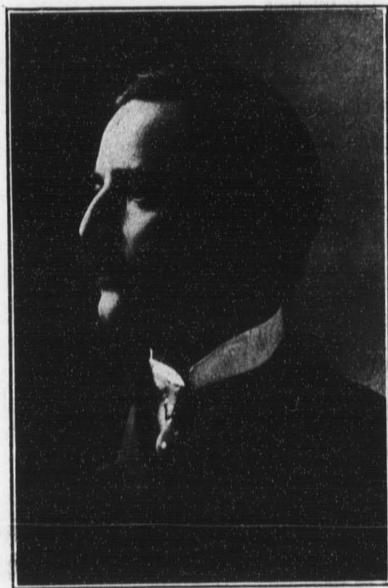
Number 1

PLENTY OF WORK TO DO.

PRESIDENT WATERS TELLS STUDENTS THEY WEREN'T BORN TOO LATE.

An Exceptionally Fine Address by the Head of the College in the First Assembly—Some Timely Advice.

There never was a boy, perhaps, who did not believe he had been born too late. Men who achieved fame in the war with Spain had growled their way through the world complaining because they had missed the Civil War and, consequently, the last chance to



President H. J. Waters.

distinguish themselves. But the opportunity came. Those men, and millions like them in other walks of life, discovered that the ages had left a lot of things undone, a lot of mighty important things, too, and that they—the boys—would have to hustle like sixty if they were to accomplish one quarter the schedule that faced them.

STRAIGHT TALK, THIS.

In such a way President Waters talked to the students who attended the first assembly, Friday morning, September 22. It was an exceptionally forceful address and it contained a wealth of homely advice and admonition that the boys and girls would do well to remember. But President Waters had something more than the annual message for the young persons in his charge. Never a man for platitudes, he talked straight, clear-cut English that everyone understood and liked. Teachers, he said, might inspire students, or they might not. It all depended upon the quality of the teacher and the student and the temperament of both. Students, he said, would be held strictly responsible for every shortcoming and every failure. These could not be laid against the college or the teacher or associates. "You are willing enough," President Waters said, "to assume the entire responsibility for whatever success may come to you, but you are just as ready to lay the responsibility of your blunders and failures upon someone else. Have the manhood, then, to carry both, and have sense enough to profit by both. A success improperly utilized may be your undoing; a failure used in the right way may contribute to your success more than anything else that could happen to you."

"You may have asked yourself whether you have not come upon the stage of action too late, after all the really great things have been discovered or accomplished, and you may be wondering if there is left any task large enough to justify your present pains in preparation."

THE FOOD SUPPLY.

"The truth is, this is the hour of opportunity, and I mean large opportunity. So long as famine stalks unhindered through the most prosperous countries on the globe, and there are bread riots in every civilized land; so long as the world lives from hand to mouth, never having more than two

weeks food ahead; when such a prosperous and powerful nation as the British Empire must protect the trade routes from foreign countries over which come four out of every five loaves of bread her people eat, the question most fundamental to mankind—that of our food supply—is far from being settled, and will tax the ingenuity of the best-trained scientists and economists that this or any other college can furnish.

"Thus far in this age which we class as golden we have been profligate of natural resources of every sort and our progress has been dearly bought.

"The problem of maintaining this high standard of living will give employment to the best-equipped engineers and chemists. When, in the face of abundant yields, the cost of living in every land has risen to the breaking point, there is room for all the help that can be afforded by those trained in the arts of science, of home making, and home management.

"You need have no fear concerning the magnitude or importance of the work before you.

"What may very properly give each of you and us the gravest concern is whether you will be capable of measuring up to the opportunities presented.

"If you will go out prepared to do something and do it right, the world will meet you more than half way and will cheerfully supply the chance."

It was a mistake, the President said, for students to suppose that coming to college meant a religious vacation. They should go to the church they attended at home. They should not shut themselves away with their books.

"Join a literary society," he said. "Take a reasonably active part in college life. You are not here primarily to be a football player or a college rooter. These things are incidental—important, but not to be thought of as against the thing you came here to do: To fit yourself for life, to study."

AS TO THOSE ABSENCES.

President Waters referred to the rule which says that any student absent ten times without excuse will be automatically suspended. Students, he said, should understand that they are not entitled to one unexplained and unexcused absence. There are no "cuts" in business, he said. The employee who tries that in real life—the term used in referring to the period after college—will find himself out of a job.

The Auditorium was very nearly filled. The faculty and instructional staff occupied every chair on the plat-

THE NEW GYM'S READY.

A DATE HAS NOT BEEN SELECTED FOR THE FORMAL OPENING.

No Finer Structure of Its Kind in the Country—Complete Physical Training Equipment for Boys and Girls.

The date for the formal opening of the Nichols Gymnasium has not yet been definitely fixed, but probably will be some time within the next few weeks. While no program has been adopted, the present plans evidently include a big athletic carnival to be participated in by all the student organizations.

The physical training features of the gymnasium are complete. The large gymnasium on the main floor, for the boys, occupies the entire central part of the building, and is equipped with every facility. The running track in the gallery—a saucer track—is on a level with the second floor. It is the second longest track in the West, being exceeded only by the track in Convention Hall in Kansas City, Mo.

THE POOL 40 x 60.

In the west end of the basement is a large, well-lighted room in which are the swimming pool and the lockers and showers for the boys. The pool is 40 x 60 feet, is tile lined, and averages ten feet in depth. In the other half of the basement is the girls' swimming pool and locker room. This pool is shorter and not so deep as the boys'. The girls' gymnasium adjoins their swimming pool in the basement. While not so large as the boys' gymnasium, it is just as well equipped.

There are three stories above the basement. From the center two gigantic towers add to the castle effect. The building is the fourth in the quadrangle at the south end of the campus, composed of the library, the domestic science building, the auditorium, and the gymnasium.

CLASSES MEET THERE.

The building has been conditionally accepted by the board of regents. Gymnasium work will begin within the next few weeks. Classes in public speaking and German are now being taught there, and the literary societies will move in at an early date. Professor McKeever will have his office and class room in that building.

Guy S. Lowman, director of athletics, is in charge at the gymnasium. Mr. Lowman began work September 15. He is a graduate of the Springfield, Mass., Training School—a school for physical trainers. For two years he assisted Coach Roper at Missouri.

Then he went to the University of Al-

abama and was director of athletics there, last year, when he was called to this college.

The new gymnasium is in the roll call. President Waters followed Iowa to the platform. The Iowa delegate had told, glowingly, about the lakes and the resorts of his state, its streams, and its happy homes. The talk gave Mr. Waters his "cue." "Where there might be lakes in our state," he said, "we have fields of alfalfa and wheat and corn. We have happy homes, thousands of them. There are no happier homes in the whole world. And nowhere is there such excellent reason for happiness, for Kansas—dry, compared to many states—is raising the finest, most temperate crop of boys and girls in the United States."

The President delivered a set speech Wednesday to 5000 persons listening to the deliberations of the congress. He spoke, Saturday afternoon, before the First Rural Life Conference of Missouri at Kirksville. President Waters is to speak, October 17, in the International Dry Farming Congress at Colorado Springs.

THE ENROLLMENT GROWS.

More than 1900 Students Have Entered, an Increase Over 1910.

The drouth didn't affect the enrollment of students at the Kansas State Agricultural College. It is larger this year than last by more than one hundred. More than 1900 students have entered for the fall term. At this time last year there were 1796. Late comers will bring the total for this term up to nearly 2000. The winter and spring terms will add still more. At the present rate of increase the enrollment for the entire year will reach nearly 2700.

The foreign colony at the agricultural college also has grown this year. The countries represented are: Japan, Mexico, Scotland, France, the Philippine Islands, and Hawaii. New York and California have boys here. Eighteen states east of Colorado have students enrolled this year in the agricultural college.

These include Missouri, Iowa, Illinois, Indiana, Ohio, Pennsylvania, New Hampshire, and New York.

THE Y. M. C. A. IS BUSY.

R. Stanley, the New Secretary, is a Graduate of Earlham.

The new secretary of the Y. M. C. A., R. Stanley, is a graduate of Earlham College at Richmond, Ind. He has spent about three years in association work, having been president of the college association while in school and later acting as general secretary of the same association.

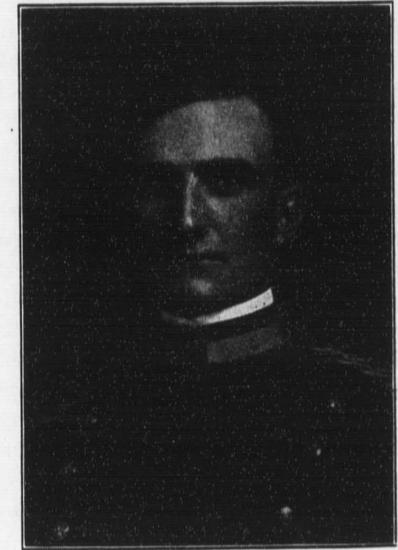
The membership campaign is to be

"TURN OUT THE GUARD!"

THE NEW COMMANDANT IS HERE: FIRST LIEUT. R. P. HARBOLD.

A National Organization Has Been Formed, he says, to Standardize the Teaching of Military Science—No Changes Now.

The new commandant is here. Of course Lieutenant Harbold arrived several weeks ago, but not officially, it should be understood, until announced through official channels in a thoroughly official way. This is one thing the regular army officer insists



Lieut. R. P. Harbold.

upon. If he didn't, the chances are the men would steal him some night and make him walk a post. So, from this issue, R. P. Harbold, first lieutenant Twenty-fifth Infantry, U. S. A., is officially a part of the Kansas State Agricultural College. Upon him rests the duty of teaching military science to the sons of Kansas—which includes, primarily, the task of walking erectly, eyes to the front, toes at ten minutes to two, and watch the neck of the man in front.

TO HAVE A UNION.

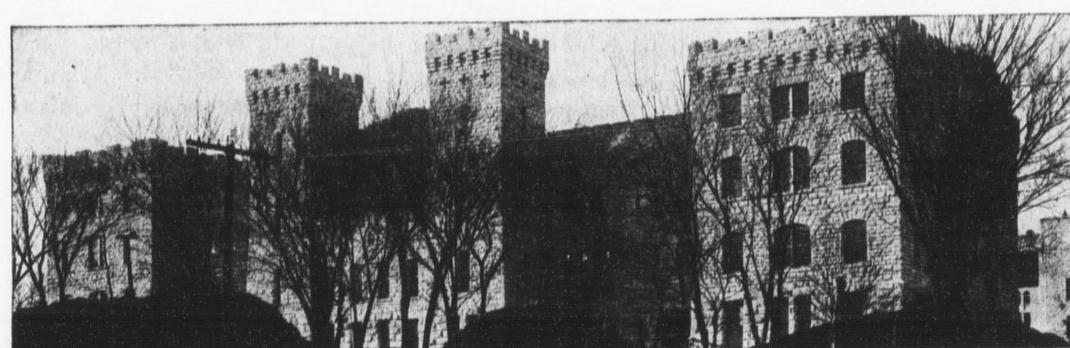
This business of teaching military science has been placed upon an organized basis. The officers of the regular army detailed to agricultural colleges and other institutions of learning are to have meetings hereafter, possibly once a year, to discuss methods and experiences in teaching tactics to young America. An informal organization of this kind was completed, this summer, at Camp Prairie, Ohio. Lieutenant Harbold attended the meeting and was chosen general secretary.

Lieutenant Harbold believes he will enjoy his new detail. He has about 450 students in the cadet corps. The present staff of officers, he says, will not be changed now, but after he has had a chance to observe their work in the field much more closely than he has yet done the staff doubtless will be rearranged. But this is a matter for the future, to be decided, perhaps, in November.

HE'S BEEN PROMOTED, TOO.

A meeting was held Thursday, September 28, in the Old Armory, in which provisional companies were organized and other preliminaries disposed of necessary to the usual work of the corps. Drilling is progressing satisfactorily, and the men are showing earnestness in their work.

When Mr. Harbold was detailed to the college, last spring, he bore the rank of second lieutenant. Since then he has been promoted to a first lieutenancy, which means one more bar on the shoulder strap, and a lot more dollars. The new rank dates back to March 11, when Lieutenant Harbold was stationed at Fort Lawton, Washington. He and Mrs. Harbold have established themselves at 816 North Juliette Avenue. The military department will be in its new quarters in the Nichols Gymnasium within a week or two.



The New Gymnasium.

form. Dean Brink read the morning lesson, and Professor Valley sang a sacred number, with Miss Baum as accompanist. The orchestra, directed by Professor Brown, played with its usual excellence.

The College Envoy at Baker.

Dean Brink represented the college, September 24, at the inauguration of President Mason, of Baker University. President Taft was the especially honored guest.

abama and was director of athletics there, last year, when he was called to this college.

THE PRESIDENT WAS BUSY.

Several Speeches by the College Head and Others to Come.

President Waters, of the Kansas State Agricultural College, made the hit of the day in the opening session of the National Conservation Congress. The Kansas delegation had chosen the President to answer for the

made this week. It is expected that a large number of the students will join the association, as the college gymnasium classes probably will not be well organized until after Christmas. The first gymnasium classes of the college year met September 27.

A game room is being fitted up in the lecture room and will contain such games as cue roque, shuffleboard, box-ball, checkers, and chess.

A special exercise room is being fitted up with stall bar, pulley weights, punching bag, and lifting weights.

THE KANSAS INDUSTRIALIST

Established 1875.

Issued weekly during the college year by the Kansas State Agricultural College, Manhattan, Kansas.

PRES. H. J. WATERS Editor-in-chief
PROF. C. J. DILLON Managing Editor
DR. J. D. WALTERS Local Editor

Except for contributions from officers of the college or members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism, under the direction of Prof. Charles Dillon.

The typesetting and other mechanical work is by students in the school of printing, of which J. D. Rickman is superintendent. Both these departments are in Kedzie Hall.

Newspapers and other publications are invited to use the contents of the paper freely without credit.

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SATURDAY, OCTOBER 7, 1911.

ANOTHER YEAR.

With an encouraging increase in its enrollment, particularly from points outside the state, the Kansas Agricultural College faces its year's work with smiles. It is distinctly hopeful when young men and young women come great distances to write their names where, not so many years ago, only a few hundred were registered, and those from homes within the state's boundaries. But more than all else, perhaps, is the pleasure found in the fame attaching to the college for its common-sense, practicable and practical methods and influences in ways that make real men and real women—a fame that has spread beyond the seas.

If the present ratio were to continue, the college enrollment, by spring, will have passed the 2700 mark. Students are here from Europe and from China and the Philippines, and from many eastern states. Every class room is in use. There isn't a vacant house in the town. The Y. M. C. A. and the Y. W. C. A. and the fraternities and sororities and all the other forms of student activity are in full swing. The bells are ringing, college colors are waving, the football enthusiasts are working, and the rooters' clubs are rooting. In every possible way the business of getting an education is going forward.

If it chance that you do not grasp the full import of what these things are to the people of Kansas—and abroad—it might be well to examine the roster of 1875 and that of 1911, printed elsewhere in this issue. Better than columns of urging, perhaps, those names will tell you how the importance of agriculture and the industries has grown in this fine country of ours. Thirty-five years ago, when THE INDUSTRIALIST was bowing its first bow to the state as a four-column folio, all the students and teachers in the college could have found ample seating room on a fifty-foot lot. Now, even at the beginning of the term, the teaching staff, alone, would be badly crowded in such small space, and the students, almost 2000 in number, are a very large and important part of the town's population.

Moreover, it should be remembered, this large attendance, this extraordinary growth, proves the increasing interest in technical education and an understanding of its value. Men and women are realizing, more and more, that to succeed in this world one must know how to do a thing better than anyone else, and be willing and eager to do it. "There's a job for every man worth while," said an employer of men, a few days ago, in Kansas City. And he continued: "O, for men who are not afraid to work a few minutes over time. How I'd like to see a man get here a few minutes before 8 o'clock! How I'd like to hire six 'all-round men.' But they're scarce."

Colleges are supplying this need. There are "dummies," of course, in every walk of life, but the percentage of college-trained men who succeed in work calling for efficiency is encouragingly large. The people expect it to be larger. They expect—quote President Waters' epigram of last spring—"Dollar for Dollar."

"WHY I CAME TO COLLEGE."

The Interesting Reasons Given by Students to a Big Question.

"Why I Came to College," was the preliminary, "try-out" assignment for a dozen new students, last week, in the department of industrial journalism. Here are a few of the results; the first is by a young woman student.]

Discontent did it. Of course, there may have been other reasons which influenced my decision to enter college, but this was the great "first cause." I was tired of spending my days in a thankless effort to teach grammar and fractions to boys and girls for the princely compensation of \$40 a month, and the privilege of doing my own janitor work; and even the charms of a country boarding house, where the menu consisted of tough steak and unseasoned, lumpy mashed potatoes, twenty-one times a week, had begun to pall.

My mind was choked and stifled by the companionship of persons whose library contained only Montgomery Ward and Co.'s catalogue and Mrs. Southworth's "Hidden Hand."

I longed for the richer, broader life that would be mine when I could earn it, and I desired the knowledge and training which would enable me to broaden and enrich the lives of those about me. College opened the door to what I sought, and so to college I came.

My coming to the Kansas State Agricultural College was entirely the result of circumstance. An elder brother had finished high school and I had completed the third year's work when our parents decided to move to a college town. They wished to give their sons opportunities which they had never known. The farm and its problems had always appealed to my brother. The school in which the science of successful farming was taught was at Manhattan. Solely because of this fact I am in your class to-day.

When I was graduated from high school I was unprepared to support myself. Therefore I came to college to learn how to make my own living. Domestic science had been put into the high schools, recently, and the demand for teachers was increasing. The work appealed to me, so I decided to fit myself to teach it. A college course offered the special training I needed, and at the same time a good general education.

I did not come to college to see how much money I could spend or how many social functions I could attend. Neither did I come expecting to get out of work, or to find my path strewn with gold nuggets and roses. I came because I believed that, having a store of knowledge, I would be more useful in the world, and more nearly capable of doing the work that God intended me to do.

My first introduction to K. S. A. C. was on days that were so foggy that one could see only two or three buildings at one time, so that the largeness of the institution did not impress me as it would have done had I seen it for the first time on a clear day.

I had not been here long when I heard some one talking about the oratorical contest and incidentally spoke of the "Hamiltonian" literary society. I soon learned more about the contest and the societies and decided that I needed the training afforded by the societies.

Upon looking back to the time when I started to college, and upon asking myself why I came, I can say truthfully and firmly that the chief reason was a desire for a higher education than could be obtained at the small high school of my community. I had lived on a farm up to that time and, being tired of the hard work, I decided to fit myself for some other occupation in which brains would count more than muscle. Of course the desire for a change of environment and the happy life of the college man appealed to me and influenced me in making my decision.

I have never regretted that I came to college. Here we are offered the opportunities of a lifetime. We grow wiser day by day and become better

fitted to perform the duties that civilization demands of us. Dr. Eliot says: "The future of America depends upon our college men," and when we stop to consider that only a small percent of our population to-day came from college, and that over one half of the important positions are filled by college-trained men, can there be any doubt in our minds of the value of a college education?

My parents did not have the advantage of a college education, but they realized the value of one. My brother went before me, and nearly all of the

A GOLDEN TEXT.

For what is a man profited, if he shall gain the whole world, and lose his own soul? Or what shall a man give in exchange for his soul?—Matthew 16:26.

"big boys," who were in high school when I was in grade school, went.

Now that I have been here a year I think it is the best place a man can spend the first four years after graduating from a high school. On entering I had but a faint idea of what I wished to do in after life, but the three terms have impressed me clearly as to my future business.

I think the college is a great melting pot, as it were, separating the pure from the impure; the fine from the

old country bacon for breakfast, says *The Star*, editorially, there is the country smoked ham in the "smokehouse," and there are potatoes stored in the "cave," and there will be plenty of winter apples, and there will be jelly and jam and preserves and all the "trimmings" for a dinner that would make the city man shout for joy.

The Star is mistaken. Precious few farmers have smokehouses, and caves for apples and potatoes these days, and all the good things the inspired writer imagined. Either this writer is of the old school when such conditions actually existed, or he has been reading one of "Hop" Smith's delightful Virginia stories. Missouri has mighty few smokehouses and Kansas is not one whit better. The farmers in these states—speaking generally—ship their hogs to Kansas City where packers do the curing and the smoking. The hams and shoulders and bacon are shipped back to the town near which the farmer lives, and he buys them at an advance of 35 to 40 per cent. The farmers of Kansas pay out annually for meat, to local butchers, between 4 and 7 million dollars—meat that they produced. Kansas and Missouri farmers eat very little fresh meat nowadays. Their average meat bill for a year—taking about 200 ordinary families as examples—is from \$55 to \$110. "Hog killing time" has vanished from American farm life. It is such dirty work, you know, and one

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The Soil.

By J. T. WILLARD, Professor of Chemistry.

The soil is the basis of all life but the lowest. Silent, unresisting, a prey to wind and water, it covers portions of the earth as a mantle of wealth. The strength of empires has for ages been drawn from it, and ever will be. A fertile soil is indispensable to the propitious founding, the continued development, and the perpetuity of a great people. Itself a product of disintegration and decay, it is the theater of organization and growth, the blending boundary between the mineral kingdom and the realm of life.

The earth has existed in substantially its present condition for unknown millions of years. It has reached this state by the ceaseless action of natural forces, forces that are acting to-day. The conditions that formed and placed soils in the past are operating now in a manner vital to their preservation and use. Hence there can be no intelligent and continuously effective treatment of soil that will use its fertility and at the same time conserve its possibilities, unless there is an understanding of the means by which soils have come to the condition in which man finds them.

coarse, and making an indelible dividing line between these different classes which lasts through eternity.

My main reason for a college course now is that in whatever line of work I enter benefit enough should be derived to pay for the time spent and money invested. The most successful men are those who have been trained. I believe that nothing will round out a man like a good, solid college course.

Ever since I was in the lower grades, the end I had in view was to take a college course. I think it was the example of my brother and sister who left me and went to high school or college. Their absence made me the more determined to go to school. My parents gave encouragement. The close of every school year was looked upon as another milestone passed on the way to college.

Most of the time spent in high schools was to get credits necessary to enter a medical college, but when my high school course was almost finished all desire for the medical profession had disappeared. At last I was ready to go, but where and for what purpose? That fall I could not leave the work at home until Christmas and had decided to wait until the following year, but two of my classmates were here at school, so I came back with them.

LO, THE POOR FARMER!

A Missouri farmer writes to *The Star* to complain that among other serious handicaps to the farm life is the fact that farmers have nothing to eat but eggs and chicken. When the family revolts against eggs and good

is almost certain to get grease or other filth on the cushions of the new car.

AS TO LECTURE TICKETS.

What about a plan for a less strenuous drawing of seats for the lecture course tickets? The old, "early bird" plan will be followed again, this year.

Here is a plan used successfully by one school in the state. Each buyer receives a number specifying how many tickets he bought. Duplicate numbers are kept by the committee and the buyer's choice of position in the house also recorded.

At an announced time the sale of tickets is stopped and the numbers mixed in a box. The number first drawn has first choice, the committee drawing for the purchaser. The following number has second choice in the same manner, and so on until the last number is reached. Then number one is put in and drawn, and so on till the number below the number originally drawn is reached.

A variation of this rule might be to give out sale number checks, and after determining by lot who had first choice the purchaser could then be allowed to go to the board, in person or by proxy, to select a limited number of tickets.

E. A. V.

Always a Way.

Betty wanted some trimming for a lavender linen suit, but had little time for handsewing, so she cut some of the flower designs from leftover pieces of an applique curtain and arranged in a most effective design on the waist and coat. They looked like braiding.—*Ladies Home Journal*.

With You.

Summer has gone from the distant hills. Summer that went with you. Fleeted by the light the roads stretch brown. Singing the country and gay the town. Under the wild leaves falling down; Gold is the autumn's hue.

But summer has gone from the distant hills, Summer that went with you. Summer has gone from the soul of things. Summer that went with you. Strong from the north the young wind sings. Swift through the air the snowbird sings. Hot in the heart the red blood stings; Clear is the autumn's blue.

Summer that went with you. GERTRUDIE BROOKES HAMILTON. In *Smith's Magazine*.

SUNFLOWERS.

And now, may it please the court, what does Mr. Coburn intend to do with the money?

One thing is certain: No ex-convict ever paid much attention to chinch bugs or grasshoppers.

Now that Charles Battell Loomis is dead the magazines are beginning to print his "last story."

The name of the teacher in District 53, the Luray Herald says, is Helen Mudd. This is true, also, of dust.

"The beggars are thick in London," said the Kansas City Star, last week. Must be good picking over there.

There is no particular sense in butting at a stone wall—as a regular business.—President Anderson, in 1874.

The American Women's League, of Manhattan, had a "food sale," one day last week, at Woods' undertaking rooms. Cheerful.

The next star in vaudeville, of course, will be Lena Binkey, the telephone operator who gave the alarm in the Austin flood.

"Midlothian Turnpike," said Mrs. Silage, as she stirred the cat briskly out of the kitchen, "was just the place for a cruel, dark deed."

A careful reading of Farmers' Bulletin 470, "Game Laws of 1911," shows everything protected except the targets in the shooting galleries.

Inventive Age says that cactus contains more heat units than coal or wood and gives off a fine illuminating gas. Did you ever step on one?

The Italian-Turkish war may not amount to much as a first-class scrap, but it will draw a lot of attention to the geography of that part of Europe.

Judging by the success of his many stories written since he died, six months ago, David Graham Phillips should have "passed over" in his childhood.

That was an awful knock W. Y. Morgan, of the Hutchinson News, put over on Berlin. He wrote that a cigar as good as the Tom Moore could be bought there for much less than in Hutchinson.

In a country as old as China and in a country as new as the United States, the farmer is its most important citizen and agriculture its most important industry.—B. F. Yoakum, President Frisco System.

THE KANSAS INDUSTRIALIST offered to pay the man's fare from Niles, Mich., to Salina if he would tell what ailed the Union. He refused, declaring no one knew the answer. This proves the man is not Kimmel.

There are those who think their troubles are the worst ones in the world; who say that fortune surely has them beat. But they know not of the sorrow that is in the farmer's heart, when the blotch's on the apple and the chinch-bug in the wheat.

Mr. Faxon, of the Garden City Telegram, calls it the "Atchison, Topeka, & Santa Fé Railway-Kansas State Agricultural College-Arkansas Valley Development Association-Diversified-Farming-Special." And Mr. Faxon is not the president of it, either; bear that in mind. LATER.—It develops that Mr. Faxon is the president of the train and will accompany it, speaking whenever possible.

One Society Hall is Dedicated.

The Hamp.-Io. society hall in the Nichols Gymnasium was informally opened by a joint meeting of the two societies there last Saturday night. About thirty couples were present to enjoy the evening. Stanley Clark was master of ceremonies. Light refreshments were served.

ALUMNI NOTES.

J. E. McDowell, class of 1911, is teaching in Blue Rapids, Kan., this year.

Dr. J. W. Lumb, '10, living in Glenolden, Pa., is visiting his parents at 1016 Pierre street.

Clif. Stratton, '11, is assistant circulation manager of *The Kansas City Star* in Kansas City, Kan.

J. A. Jenkins, '11, has gone to Pan-ama as an electrical engineer in the government service. He expects to remain there at least a year.

H. S. Records, '09, is teaching the eighth grade in the city schools at Frankfort, Kan. He also teaches agriculture in the high school.

Oley Weaver, '11, was a visitor at the college last week. He is managing *Bill Barlow's Budget*, a weekly newspaper at Douglas, Wyo.

A daughter was born, July 25, to Mr. and Mrs. K. P. Mason, of Cawker City, Kan. Mr. and Mrs. Mason are members of the classes of 1904 and 1905.

George Elliott, known here as "Mose," a graduate civil engineer of 1911, has been appointed inspector of bridges for the Eastern Coast Railway of Florida.

E. J. Trosper, class of 1910, has been a government sheep inspector in New Mexico this summer. He returned to Estherville, Iowa, this fall to teach in the high school.

A. E. Ridenour, '96, and Mary (Finley) Ridenour, '96, are now at Corvallis, Ore., where Mr. Ridenour is instructor in foundry practice at the Oregon Agricultural College.

Miss Wilma D. Evans, '09, is teaching domestic science and art and agriculture in the high school at Goodland, Kan. Much interest in the new courses is shown, she says. Miss Evans taught domestic science and art in Houston, Tex., last year.

Mr. and Mrs. Charles L. Marlatt, of Washington, D. C., announce the birth of a son, Charles Lester Marlatt Jr., July 25, 1911. Mr. Marlatt, a graduate of K. S. A. C., formerly lived in Manhattan. He is now assistant chief of the division of entomology, United States Department of Agriculture.

A photograph of a fine corn field in East Africa has been received by Mrs. Wilder from a former Kansas Agricultural College student, the Rev. P. W. Keys. With reference to the picture, Mr. Keys writes: "This is what K. S. A. C. is doing for our industrial department."

Invitations have been received in Manhattan for the wedding of Miss Zephierine Ellen Towne, '11, and Capt. P. M. Shaffer, in Saratoga Springs, N. Y., October 10. Captain Shaffer was formerly commandant and professor of military science at K. S. A. C. He is now stationed at Fort Lawton, Washington. Mr. and Mrs. Shaffer will live there.

Samuel Cobb, '89, and Mrs. Cobb were here from Wagoner, Okla., for Commencement. Mr. Cobb owns an interest in the Wagoner Record, another interest in a harness and saddle store at Wagoner, and is in the real estate business. Mrs. Cobb formerly was Miss Carrie Hunter, of Manhattan. She attended the agricultural college from '86 to '89.

The alumni and former students of the Kansas State Agricultural College are to have a reunion at Dallas, Texas, Tuesday, October 17, in connection with "Kansas Day" at the Texas State Fair. The meeting will be held on the fair grounds. A notice as to the exact location will be posted in the lobby of the Coliseum. All former students residing in or near Texas are cordially invited to be present.

At a recent conference of the agriculture and manual training teachers of the state high schools of Minnesota, the following K. S. A. C. alumni held a reunion as the guests of De F. Hungerford, at University Farm, St. Paul; F. E. Balmer, '05, M. R. Shuler, '06, O. M. Kizer, '08, Seneca Jones, '08, John May, '10, D. F. Hungerford, '10, V. H. Florell, '11, W. A. Barr,

The Teaching Corps in 1875.

J. A. Anderson, president, and professor of political economy.
J. H. Lee, professor of English and history.
M. L. Ward, professor of mathematics.
J. S. Whitman, professor of botany, entomology, and geology.
W. K. Kedzie, professor of chemistry and physics.
E. M. Shelton, professor of practical agriculture and farm supt.
E. Gale, professor of horticulture and superintendent of nursery.

J. E. Platt, professor of elementary English and mathematics.
A. Todd, superintendent of mechanical department.
Mrs. H. V. Werden, teacher instrumental music.
Mrs. H. C. Cheseldine, superintendent sewing department.
A. A. Stewart, superintendent printing department.
W. C. Stewart, superintendent telegraph department.
George H. Fallyer, teacher of phonography.

—The Industrialist, April 24, 1875.

The Teaching Corps in 1911.

Henry Jackson Waters, B. S. A., president.
John Daniel Walters, professor of architecture and drawing.
Julius Terrass Willard, dean of science, professor of chemistry.
Joshua Douglas Rickman, superintendent of printing.
Benjamin Luce Remick, professor of mathematics.
Benjamin Franklin Eyer, professor of electrical engineering.
Herbert Fuller Roberts, professor of botany.
William Arch McKeever, professor of philosophy.
Edmund Burke McCormick, dean of mechanic arts, etc.
Albert Dickens, professor of horticulture.
Clark Mills Brink, professor of English literature.
Albert Moore Ten Eyck, professor of farm management, etc.
Ralph Ray Price, professor of history and civics.
Julius Ernest Kammerer, professor of economics, etc.
John Vanzandt Cortelyou, professor of German.
Olof Valley, professor of music.
Francis Siegel Schoenleber, professor of veterinary medicine.
John Harold Miller, director of college extension.
Thomas J Headlee, professor entomology and zoology.
Lieutenant R. P. Harbold, commandant, prof. military science.
John Orr Hamilton, professor of physics.
Mary Pierce Van Zile, professor of domestic science.
Edwin Harrison Webster, director experiment station.
Lowell Edwin Conrad, professor of civil engineering.
Antonetta Becker, professor of domestic art.
Charles Anderson Scott, state forester.
Leslie Arthur Fitz, department of milling industry.
Edwin Lee Holton, professor rural education.
Andrey Abraham Potter, professor steam and gas engineering.
Roy Andrew Seaton, prof. applied mechanics and hydraulics.
William M Jardine, professor of agronomy.
Charles James Dillon, professor of industrial journalism.
Blanche Earl Enyart, director of physical training.
James William Seardon, professor of the English language.
Robert Henry Brown, assistant professor of music.
George Adam Dean, assistant professor of entomology.
William Hiddleston Andrews, assistant professor mathematics.
George Carpenter Wheeler, lecturer on farm management.
Leonard Whittlesey Goss, asst. prof. veterinary medicine.
Pleasant Crabtree, lecturer on farm management.
Leland Everett Call, assistant professor of soils.
Ula May Dow, assistant professor of domestic science.
Herbert Hiram King, assistant professor of chemistry.
John Bennett Whelan, assistant professor of chemistry.
Charles Oscar Swanson, assistant professor of chemistry.
Lewis Henry Beal, assistant professor of English.
George Eben Bray, assistant prof. shop methods and practice.
Wilmer Esla Davis, assistant professor of botany.
Clarence Victor Holisinger, lecturer on horticulture.
Frances Langdon Brown, lecturer on domestic science.
Walter Scott Gearhart, highway engineer.
George Sherwood Hine, lecturer on dairying.
Harry Bruce Walker, drainage engineer.
Ollie Ezekiel Reed, professor of dairy husbandry.
Arthur Henry Leidigh, assistant professor of crops.
Paul Nelson Flint, assistant professor of animal husbandry.
Ada Rice, instructor in English.
Daisy Dorothy Zeininger, instructor in mathematics.
Ella Weeks, instructor in drawing and in color and design.
Leland David Bushnell, assistant professor of bacteriology.
Michael Francis Ahearn, instructor in horticulture.
Burton Ray Rogers, instructor in veterinary medicine.
Ina Foote Cowles, instructor in domestic art.
Annette Leonard, instructor in English.
William Leonard House, instructor in woodwork.
Jeremiah Hafer Hollar, instructor, foreman of blacksmith shop.
Leonard Marion Pears, instructor in entomology.
Annie Elsie Lindsey, instructor in domestic science.
Porter Joseph Newman, instructor in chemistry.
Everett Parker Johnston, instructor in public speaking.
Alfred Everett White, instructor in mathematics.
Raymond Garfield Taylor, instructor in history and civics.
Walter William Carlson, instructor, foreman of machine shop.
Edwin Cyrus Miller, instructor in botany.
Robert Kirkland Nabours, instructor in zoology.
Francis Burzley Milliken, instructor in zoology.
Ina Emma Holroyd, assistant in mathematics.
Earl Natanael Rodel, assistant in printing.
Charles Yost, foreman of boiler room.
John Thompson Parker, assistant in woodwork.
Charlene Furley, assistant in English.
Jessie Annaberta Reynolds, assistant in history and civics.
William Carl Lane, assistant in electrical engineering.

Flora Cornelia Knight, assistant in English.
Margaret Anna Mack, assistant in history and civics.
Chester Allen Arthur Utt, assistant in food analysis.
James Arthur Milham, assistant, animal husbandry, Fort Hays.
Anna Wilkinson Gordon, assistant in history and civics.
Samuel Wilson McGarrah, assistant in mathematics.
Harrison Eleazer Porter, assistant in mathematics.
Claude Carroll Cunningham, assistant in agronomy.
Christian Jensen, assistant state forester, Fort Hays.
George Keller Helder, assistant supt. and secy., Fort Hays.
Burton Sylvester Orr, assistant in power and exp. engineering.
Elmer Johnson, assistant in power and exp. engineering.
Raymond Clifford Wiley, assistant in chemistry.
Thomas Powell Haslam, assistant in veterinary science.
Amy Alena Allen, assistant in printing.
Clarence Ward Nash, assistant in crops.
Helen Knostman Huse, assistant in domestic science.
Edison Frank Kubin, assistant in veterinary science.
Thomas George Paterson, assistant in animal husbandry.
Gertrude Barnes, assistant librarian.
Jessie Gulick, assistant librarian.
Estella May Boot, assistant in English.
James Russell Jenness, assistant in physics.
Ada Marie Baum, assistant in music.
Ethel Kate May Ping, assistant in music.
Dean Humboldt Rose, assistant in botany.
Madge Kay, assistant in mathematics.
Turner R. H. Wright, assistant in animal husbandry.
Charlotte Augusta Morton, assistant in drawing.
Frank Clyde Harris, assistant in architecture and drawing.
James Henry Bent, assistant in veterinary medicine.
John Willard Calvin, assistant in animal nutrition.
Carl Fred Chase, assistant in agronomy.
Ella Frances Miles, assistant in domestic science.
Alanson Lola Hallsted, assistant in dry farming.
Clare Lavon Biddison, assistant in vocal music.
Howard McCune Chandler, assistant in exp. engineering.
Ellery Franklin Chilcott, supt. experiment station, Garden City.
Charles Henry Cleverger, instructor in mathematics.
Nelson Antrim Crawford, assistant in English.
James Burgess Fitch, assistant in dairying.
Arthur Roy Fehn, assistant in mathematics.
Arthur Lynn Harris, assistant in heat and power.
Thornton Hayes, assistant in machine shop.
Josiah Simson Hughes, assistant in chemistry.
Jane Agnes Humphrey, assistant in domestic science.
Charles Jablow, assistant in mechanical department.
Albert Richard Losh, assistant in highway engineering.
Otto Maurer, assistant in bacteriology.
Charles Ernest Millar, assistant in soil analysis.
George Ellsworth Raburn, assistant in physics.
J. B. Gingery, assistant in veterinary medicine.
L. B. Barber, assistant in veterinary medicine.
F. F. Frazier, assistant in civil engineering.
Hal Smith, assistant in mechanical engineering.
Arthur B. Smith, librarian.
B. H. Ozment, band leader.
Guy S. Lowman, athletic director.
E. Y. Floyd, assistant in physics.
D. G. Blattner, assistant in physics.
George A. Davis, foreman of foundry.
R. R. Dykstra, assistant professor of veterinary science.
F. C. Gutsche, assistant in chemistry.
A. L. Burns, assistant in chemistry.
Netta B. Humfeld, assistant in domestic art.
Anna Bayha, assistant in domestic art.
Grace Smiley, assistant in domestic art.
Vera Mutchler, assistant in domestic art.
Helen B. Hobbs, assistant in domestic art.
Carlotta Ford, assistant in domestic art.
Jennie E. Caton, assistant in domestic art.
Max Ravitch, assistant in English.
J. W. Scott, assistant in entomology.
J. C. Christensen, financial secretary.
I. Victor Iles, instructor in history and civics.
D. E. Lewis, assistant in horticulture.
J. G. Lill, assistant in soils.
Grover Pratt, assistant in architecture.
Oliver Hunter, assistant in bacteriology.
J. G. Jackley, assistant in bacteriology.
A. M. Woodman, assistant in botany.
Neil E. Stevens, assistant in botany.
Harlan D. Smith, assistant in industrial journalism.

'11, O. C. Crouse, '11, W. E. Berg, '11, and Vern McCall, sophomore in '08. After refreshments, each one was required to give a full account of himself since leaving college. Apparently all the graduates have been very active and meeting with success. Steps were also taken to form an alumni association for the K. S. A. C. of the Northwest.

One of the enjoyable events of Commencement week, last June, was the celebration of the tenth anniversary of the graduation of the class of 1901. Of the sixty members that graduated in this class, thirteen were present. They were: Erma Locke, teacher, Phillipsburg, Kan.; Adelaide Strite, teacher, Spokane, Wash.; Ina Cowles, assistant in domestic art, K. S. A. C.;

Fanny Dale, stenographer, K. S. A. C.; Maude Sauble Rogler, housewife, Bazaar, Kan.; Helen Knostman Pratt, housewife, Manhattan; Minnie Howell, teacher, Kansas City; Bryant Poole, live stock commission merchant, Kansas City; P. K. Symns, farmer, Troy, Kan.; Leroy Rigg, farmer, Kirwin, Kan.; John A. McKenzie, farmer, Solomon, Kan.; Harry H. Fay, farmer, Wilsey, Kan.; and Charles A. Scott, State Forester, Manhattan.

The associate members present were: Mrs. McKenzie, Mrs. Fay, and Mrs. Scott. The second generation of the class was represented by Irene Rogler, Mary McKenzie, Adelaide and Elizabeth Scott, Reginald Fay, and James Pratt. Mrs. C. S. Sidwell, of Broken Bow, Neb., Miss Elizabeth Bruncker, of Stockdale, Kan., and Letta Hopper,

of Wilsey, Kan., were guests of member of the class.

The scene of the celebration was at the home of Mr. and Mrs. Scott. The members of the class spent a few hours renewing acquaintances and in reminiscence. Letters and messages were read from members of the class that were unable to be present. One of the delightful features of the celebration was the luncheon served on the lawn by the resident members of the class.

By vote of the class, this message was sent to Miss Eleanor White, whose marriage had just been announced:

Miss Eleanor White, American Falls, Idaho. Dear Classmate: By vote of the class of 1901 in reunion assembled on June 15, 1911, the congratulations and best wishes of the class are extended to you at this time of your supreme happiness. May God bless you with happiness in the years to come is our wish.

FARM WOMEN TO MEET.

COLORADO SPRINGS, OCTOBER 17, THE PLACE AND THE TIME.

An Excellent Array of Speakers in the Men's Section of the International Dry Farming Congress, Also.

The First International Congress of Farm Women is to open in Colorado Springs, October 17. It is likely to be the most important convention of women ever held in this country. The committee in charge has agreed upon the general outlines of the program as follows:

First day, equipment and beauty of, and food values in, rural homes.

Second day, laws of physical life in relation to the family; conservation of time and strength; labor-saving devices, simple hygiene, etc.

Third day, economic value of women and children on the farm; influence of clubs, granges, and other agricultural associations; care of infants and young children, etc.

Fourth day, the rural church; reorganization of rural schools; recreation in rural districts, etc.

Each general topic is to be broken into many subjects.

Among the noted speakers on the program will be W. M. Hays, assistant secretary of agriculture, an authority on rural school work; the Rev. Warren H. Wilson, of New York, a famous worker in rural churches; Mrs. Mary Pierce Van Zile, of Kansas Agricultural College; Mrs. J. A. Widtsoe, of Utah Agricultural College; Mrs. Scott Durand, of Lake Forest, Ill.; Miss Jennie Buell, grange lecturer, of Ann Arbor, Mich.; Mrs. F. E. Brooks, of Colorado Springs, and others. Practical farm women from throughout the entire country are sending notice of their intention to participate. Ample provision is being made for entertainment features.

Many of the most famous agriculturists throughout the world have places on the men's program of the International Dry Farming Congress. The congress is devoted to the propaganda of better farming, along extensive lines known as dry-farming methods. It has 15,000 paid members and is the largest agricultural society in the world. Among the prominent names are: W. M. Hays, first assistant secretary of agriculture; M. A. Carleton, cerealist, Department of Agriculture; Dr. A. C. True, director of experiment stations; W. R. Motherwell, director of agriculture of Saskatchewan, Canada; Duncan Marshall, minister of agriculture for Alberta, Canada; J. Ed. Caron, minister of agriculture for Quebec, and the following presidents of agricultural colleges: L. H. Bailey, of New York; K. L. Butterfield, of Massachusetts; J. H. Connell, of Oklahoma; H. J. Waters, of Kansas; J. A. Widtsoe, of Utah; J. H. Worst, of North Dakota; W. E. Garrison, of New Mexico; C. A. Lory, of Colorado, and others.

THE SPEAKERS FROM KANSAS.

A Fine Representation for the State to go to Colorado.

Here is a complete list of the speakers from Kansas to attend the International Dry Farming Congress at Colorado Springs:

Dr. H. J. Waters, president Kansas Agricultural College, "The Agricultural Outlook as Affected by the Development of Dry Farming."

Prof. E. H. Webster, dean of the Agricultural College of Kansas, "Live Stock, Forage and Silo."

Prof. W. M. Jardine, agronomist Kansas Agricultural College, "The Dry-Land Potato."

E. D. Wheeler, Wakeeney, Kan., "Dry Farming in Kansas."

Mrs. Mary Pierce VanZile, Kansas Agricultural College, Manhattan, Kansas, "Food Values." (Women's Congress.)

The Dramatic Club met Thursday afternoon to reorganize.

Dear Webster has purchased and moved into the house formerly owned by R. J. Kinzer, formerly professor of animal husbandry, at Eleventh and Moro streets.

FIRST GAME A DRAW.

THE SOUTHWESTERN ELEVEN AND THE AGGIES FINISHED SIX TO SIX.

More Work and Less Mud Will Develop the Home Team in its Future Practice—About 950 Attended.

The Aggies played a draw, September 30, with Southwestern University in the first football game of the season.



The eleven from Winfield were lighter, but displayed hard training. The score was 6 to 6.

The Aggies started off like real football players. They received the kick and quickly worked the ball up the field and sent Prather over for a touchdown after three minutes of play. Prather kicked goal. After that the Aggies fought hard, but could not again cross their opponent's goal line. Neither team counted in the second quarter.

The trouble came in the third quarter. With the ball on Southwestern's 40-yard line, Nichols, right half for the visitors, plunged through the Aggies' line on a delayed pass and romped away for a touchdown. C. Schmidt kicked goal. The last quarter found K. S. A. C. fighting hard, but never a score cheered the Aggie rooters. The game ended with the ball in the center of the field.

This does not mean that the Kansas State Agricultural College is not to have a winning team this year. The Southwestern game was just a week too early. Coach Lowman has had green material, for the most part, to work with, and several of the men have reported late. Continual rains made a lake out of the new field and the campus had to be used for practice. From now on the squad will know the meaning of hard work and will play to win. The line-up of the game:

AGGIES.	SOUTHWESTERN.
Hunt.....	c. W. Schmidt
Wehrle.....	r. g. Calbeek
Burkhalter.....	r. g. Davis
Holmes.....	r. t. Ziegler
Loomis.....	r. t. Muchnor
Stahl, Hopper.....	i.e. Burchfield
Vale, Moss.....	r.e. Rutledge
Young, Polom, Lew- ellyn, Howenstein, q.....	C. Schmidt
Hartwig, Sidorfsky, l.h.....	Bacon
Hehn, Noel.....	Nichols
Prather, Shuster.....	r.h. Bernstorff
Howenstein.....	f. Bernstorff

Officials: Wade, Fredonia, referee; L. Quigley, Concordia, umpire; Lieut. Erwin, Ft. Riley, field judge; M. F. Ahearn, head linesman. Time of quarters, 12 mins. Attendance, 950.

WEDDINGS OF ALUMNI.

Stories in Brief of Marriages that Have Been Recorded Since June.

For the information of alumni at a distance, the following weddings, recorded since June 17, are reported:

Bryant Poole and Miss Elizabeth Brunker at Manhattan, June 21.

Kirk Logan, of the Bureau of Commerce and Labor, Washington, and Miss Rowena Allcut, at Kansas City.

Robert Eastman, formerly of the horticultural department, and Miss Anna Dinkneir, at St. Charles, Mo.

A. G. Kittell and Miss Marie Fenton, at Manhattan. They will live in Topeka.

Edward C. Adamson and Miss Olive Dunlap, at Manhattan. Their home will be in Schenectady, N. Y.

Harry A. Feary and Miss Maybeth Robinson were married in Manhattan, June 22.

Louis C. Aicher, of Aberdeen, Idaho, and Miss Edith Davis, of Manhattan.

L. E. Conrad and Miss Ada Noyes, June 26. At home 915 Fremont Street, Manhattan.

T. G. Paterson, of Manhattan, and Miss Katherine Hendrickson, of Mahtomedi, Minn., August 2.

Dr. Edwin C. Miller, of the botany department, and Miss Zena Dell Slye, of Pleasant Plain, Ohio, August 3.

Lieut. Emory Adams, U. S. A., and Miss Elies Yeates, of Salt Lake City, August 9.

Carl G. Elling and Miss Mary Mudge, August 9.

Ben Jeffs and Miss Bessie Tolin, of Soldier, Kan. At home in Topeka.

M. R. Alleman and Miss Sabra Kennedy, secretary to President Waters, August 19.

Horace E. Bixby and Miss Hallie M. Smith, August 28. They will live in Philadelphia.

Howard M. Chandler, of the mechanical engineering department, and Mrs. Metta S. Mack, of Honolulu, in Kansas City, August 12.

Carl L. Kipp and Miss Ethel McKeen, September 5, at Russell, Kan.

Joseph S. Montgomery, St. Paul, Minn., and Miss Grace E. Leuszler, of Linn, Kan., September 20.

D. C. Bascom, '10, and Miss Alma May Thompson, of Howard, Kan. They will live at Ft. Collins, Colo., where Mr. Bascom is general secretary of the agricultural college Y. M. C. A.

YOU'RE SURE OF CARE, NOW.

The Students' Medical Fund is a Constant Safeguard.

Hereafter, when a student in the Kansas State Agricultural College is ill, or believes he is ill, he may send for a physician of his own choosing, and receive treatment until he recovers without expense to himself except the legally required fee of 50 cents a term. The new law became operative with the opening of college, September 21.

This act was brought about by the action of the students themselves. Where there are 2000 or 2500 boys and girls, illness of some sort exists almost daily; and there is danger of epidemics not easily controlled, as experience has shown, because of the indiscretions of the students. If a boy is working his way through college about the last thing he will do is to ask advice that will cost him something. This disposition has resulted, in other years, in serious situations. In a mass meeting of the students at the college last winter these things were discussed at length. No member of the faculty was present in this meeting, as it was desired to give the students unrestrained liberty of expression. They elected their own chairman and other officers, and unanimously agreed to ask the legislature to empower the regents of the college to charge the extra fee of fifty cents a term, which was to be a students' help or sick benefit fund. This money is turned over to the state treasurer, reappropriated to the agricultural college, and the auditor authorized to issue warrants against it. It is estimated that the fee of 50 cents a term—\$1.50 a school year—will yield about \$2600.

Arrangements have been made whereby any student, regardless of his financial condition, may call upon any registered physician or surgeon of Manhattan, who will give him the attention required, with certain exceptions. A graduate nurse is to be employed to assist the physicians and, in other ways, to conserve the general health of the student body. This nurse is to receive \$800 a year. The physicians of Manhattan have agreed to give their services for \$1800 a year.

A student may obtain from the college secretary a card of credentials to the physician whom he desires to consult. The student is to pay for his medicines, except in emergency cases, when the physician will furnish medicines from his own store sufficient for the immediate need. Should a student require emergency treatment when the permit can not be obtained, he may call one of the registered physicians and the committee on student health will issue a card later upon satisfactory evidence of the student's illness. The exceptions to the rule of free treatment are described on the blanks soon to be issued.

Australia Tree Grows Fast.

The eucalyptus tree of Australia grows at the rate of ten feet a year. Many of this species attain a height of three hundred feet, with a circumference of seventy feet at the base.

The main token of a strong character is not to make known every change and phase in thought and feeling, but to give the world the finished results.—Auerbach.

HERE'S THE CLASS LIST.

WHO WAS WHO AND WHAT WAS STUDIED LAST SPRING.

The Schedule Was Blockaded, Last Commencement, by the Flood of Addresses and Other College Activities to be Reported.

Class periods are in bold-face type. Unless otherwise stated, classes meet Tuesday, Wednesday, Thursday, and Friday of each week. Departments are arranged alphabetically.

Agronomy.

Assistant Professor Call: 1, Soils II, TTS, 28; WFS, 33. 5-7, Soils II Lab, Tu, 14; W, 16; Th, 15; F, 15.

Assistant Schafer: 1, Farm Crops V, Tu, 17; 4, Grain Judging I, F, 25. 5-6, Farm Crops V Lab, 17, 2, TT, Farm Crops I & II, 47.

5-6, Farm Crops I & II Lab, W, 29; F, 17, 3.

Farm Crops III, WFTF, 27. 5-6, S. Farm Crops III Lab, 27, 1-2, W, Grain Judging I Lab, 25.

Assistant Chase: 3, Farm Mechanics III, TT, 32; Irrigation & Drainage, MS, 24. 5-6, Farm Mechanics III Lab, F, 18; M, 15; Irrigation & Drainage Lab, Tu, 8; Th, 6; S, 10.

Animal Husbandry.

Professor Flint: 3-4, WF, Stock Judging II, 1/2 term, 37. 4, TT, Live Stock Management, 25.

Animal Husbandry Seminar, 5, Tu, 5-6, W, 16.

Assistant Paterson: 1-2, WF, Live Stock I & II (Freshman), 37. Live Stock I & II Lec, (Sophomore), 2, TT, 49; 3, WF, 44. 4, W.

Live Stock I & II Lec, (Freshman), 40. 5-6, Live Stock I & II Lab, (Sophomore), MWF, 45; TT, 49.

Assistant Wright: 2, Animal Breeding, 33. 3-4, MS, Advanced Stock Judging I, 34; TT, Stock Judging II, 1/2 term, 23.

Applied Mechanics and Hydraulics.

Professor Seaton: On leave of absence 1910-11. Classes in Applied Mechanics taught by Assistant Jablow and Professor Potter.

Architecture and Drawing.

Professor Walters: 1, Architectural Composition, 7, 2, Landscape Architecture, 14, 3, Architectural Composition, 9, 4, Landscape Architecture Lab, 10, 1-4, S, Seminar, 13, 1-4.

M, 5-6, MTWTF, Arch. Drawing and Composition, 15-19.

Instructor Weeks: 1-4, M, Home Decoration, 18, 1-2, WF, Color and Design II, 24. 3-4, TT, Color and Design II, 9, 5-6, TT, Color and Design I, 48; WF, Color and Design II, 28.

Instructor Putnam: 1-2, TT, Object Drawing I, 26. 3-4, TT, Freehand Drawing, 46; M, Object Drawing II, 29. 5-6, TT, Geometrical Drawing, 50; MW, Object Drawing I, 37; S, Object Drawing II, 40.

Instructor Harris: Perspective I, 3-4, MS, 25. Perspective II, 5-6, WF, Descriptive Geometry II, 3-4, TT, 13; WF, 12. 5-6, M-S, 19; TT, 20.

Instructor Morton: Working Drawings, 1-2, F, 3. 3-4, M, 20; Th, 4. 5-6, Tu, 10; Th, 6.

Bacteriology.

Professor Slack: 4, W, Water Purification, etc., 2; S, Hygienic Bacteriology, 1.

Instructor Bushnell: 3, WF, General Bacteriology, 18. 3-4, TTS, Bacteriology VIII Lab, 2.

Assistant Hayes: 4, Human Physiology, 52. 5-6, WF, General Bacteriology Lab, 19; TT, Hygienic Bact. Lab, 1.

Botany.

Professor Roberts: 1-2, S, El. Botany III Lab, 31. 4, TT, Plant Breeding, 26. 5-6, MS, Plant Breeding Lab, 26.

Assistant Professor Davis: 1, WF, Botany III Rec, 36. 1-2, MS, Plant Physiology II Lab, (with Mr. Miller), 10. 3-4, M, Botany III Lab, 18; S, Botany II Lab, 20; WF, Plant Physiology II Lab, (assisted by Mr. Miller), 14. 6, Botany III Rec, TT, 16.

Instructor Miller: 1-2, MS, Plant Physiology II Lab, (assisted by Mr. Davis), 10. 2, WF, Plant Physiology II Rec, 10. 3-4, S, Botany III Lab, (assisted by Mr. Graf), 33; WF, Plant Physiology II Lab (with Mr. Davis), 14. 5-6, M, Botany III Lab, 21. 5, WF, Botany III Rec, 12.

Assistant Rose: 1-2, S, Botany II Lab, 30. 1, TT, Botany II, 22. 2, TT, Botany III, 27. 3-4, W, Seed Testing, 16. 6, WF, Botany II, 22.

Assistant Graf: 1-2, M, Botany II Lab, 23. 3-4, M, Botany III Lab, (with Mr. Davis), 17. S, Botany III Lab, (with Mr. Miller), 31. 4, WF, Botany III, 24. 5-6, S, Botany III Lab, 20.

Chemistry.

Assistant Professor King: Chemistry III Lec, Tu, 2, 103; 4, 74; 6, 42. Chemistry III Rec, ThS, 1, 21; 2, 41; 4, 59; 6, 34. 1, F, Chemistry III Rec, 16. 3, TTS, Inorganic Chemistry III Rec, 12.

Assistant Professor Whelan: Chemistry II (old) Lec, 1/2 term, TT, 1, 107; 5, 57. Chemistry II (old) Rec, 1/2 term, WF, 1, 31; 5, 28.

Chemistry III (old) 2nd 1/2 term, 1, 31. Chemistry IV (new) Lec, W, 2, 17; 4, 33; 6, 23.

Chemistry II (new) Rec, F, 2, 41; 4, 30; 6, 20.

Chemistry II (new) Rec, 3, ThS, 31. Organic Chemistry III, 3, MWF. Combustion analysis, 5.

Assistant Professor Swanson: 5-8, TT, Quantitative Analysis, 12.

Instructor Newman: Chemistry II (old), 1/2 term, WF, 2, 46; 6, 14. Chemistry III (old), 2nd 1/2 term, 2, 43; 4, 18; 5, 27; 6, 20.

Chemistry III (old) Lab, (assisted by Mr. Hughes), MS, 1-2, 69; 3-4, 45; 5-6, 45.

Assistant Hughes: 1, WF, Chemistry II (old), 1st 1/2 term, 30; Chem, III (old), 2nd 1/2 term, 33. 2, ThS, Chemistry III (new), 42. Chemistry III (new) Lab, 3-4, W, 21; F, 41; 5-6, 45.

Chemistry III (old) Lab, (with Mr. Newman), MS, 1-2, 69; 3-4, 45; 5-6, 45.

Assistant Gutsche: Chemistry II Lab, MS, 1-2, 27; 3-4, 14; 5-6, 21; TT, 1-2, 11. 3-4, 9; 5-6, 24.

Chemistry III (new) Lab, 1-2, W, 35; F, 13.

Miss Lewis: Chemistry III (new) Lab, (with Mr. Hughes), 5-6, W, 5; F, 51.

Civil Engineering.

Professor Conrad: 1, Ry. and Highway Engrs, 18. 2, Structural Engrs, 19. 1-4, S, Surveying IV Rec, 17. 2, 3, S, Surveying IV Rec, 18. 2, ThS, Chemistry III (new), 42. Chemistry III (new) Lab, 3-4, W, 21; F, 41; 5-6, 24.

Chemistry III (new) Lab, 1-2, W, 35; F, 13.

Miss Lewis: Chemistry III (new) Lab, (with Mr. Hughes), 5-6, W, 5; F, 51.

Assistant Cunningham: Plant Propagation, 3, WFT, 4; TWS, 33. Plant Propagation Lab, 5-6, TT, 43; WF, 31.

Assistant Newman: Chemistry II (old), 1/2 term, WF, 2, 46; 6, 14. Chemistry III (old), 2nd 1/2 term, 2, 43; 4, 18; 5, 27; 6, 20.

Chemistry III (old) Lab, (assisted by Mr. Hughes), MS, 1-2, 69; 3-4, 45; 5-6, 45.

Assistant Hughes: 1, WF, Chemistry II (old), 1st 1/2 term, 30; Chem, III (old), 2nd 1/2 term, 33. 2, ThS, Chemistry III (new),

THE KANSAS INDUSTRIALIST

Volume 38

Kansas State Agricultural College, Manhattan, Saturday, October 14, 1911

Number 2

NO MORE HALL SQUEEZE.

CHANGING THE POST OFFICE QUARTERS A BIG IMPROVEMENT.

Alterations and Betterments Noted in Several Departments on the Campus
—Stock-Judging Pavilion to be Ready Soon.

Big changes at the old college this year. Even if you don't believe in Darwin's theory of evolution, you must admit that the grounds have undergone much alteration during the summer. To the upper classmen, who were here when the interior of Anderson Hall looked like the interior of a Central Branch depot, and the walks were made of cinders or of that silicate known as clay, the changes are very pleasing.

The most important change in Anderson Hall has been the elimination of the "main hall squeeze" by removing the post office to the room formerly used as the boys' cloakroom. The funkers may now get to the post office the Monday morning after examination.

laboratories are crowded. They will be used by the sophomore and junior students. The new laboratory will be used by the freshmen.

A Russian Visitor Studied Farming.

Basil M. Benzin, of Crimean Province, Russia, was a visitor at the college last week. He came from the University of Minnesota, where he took special work in agriculture. He collected information on dry farming while here. Mr. Benzin represents the Russian department of agriculture.

UNVEILING IS DELAYED.

Harris Memorial will not be Dedicated October 16—Bust not Here.

The ceremonies attending the unveiling of the W. A. Harris memorial have been postponed from October 16 indefinitely. The bust, expected from Chicago last week, has not arrived. Until it comes, President Waters will not send invitations to the ceremonies.

Everything is ready for the memorial. A site was chosen last Saturday

HOW TO STORE APPLES.

A LITTLE TIMELY ADVICE FOR THE ORCHARDIST, BY PROF. DICKENS.

Mechanical Cold Storage is Advisable for Commercial Purposes, But for Home Use and Local Markets a Cave Will Do.

For commercial undertakings, mechanical cold storage for apples seems to be the most effective and economical, but for local markets and home consumption, caves and climatic storage are sometimes more economical. Where there is any considerable quantity of apples, storage houses are good investments, Albert Dickens, professor of horticulture, says.

The management of a storage plant requires careful, systematic work. Many of the best plants now have thermostats and self-regulating apparatus. At the same time they are carefully inspected, and any considerable variation in temperature must be avoided. At the fair at Hutchinson this fall there were some very fine Winesaps that had been in storage since the first of November, 1910.

TREES NEED GOOD CARE.

"Storage," Professor Dickens says, "is the last process in the good management of a fruit crop. Poor fruit will not store satisfactorily or successfully. The first requisite for successful storage is good fruit without blemish, insect or fungous injury, picked in time, and carefully handled from the tree until it is finally packed and deposited in the storeroom. To obtain these conditions the same methods are necessary in Kansas as in New England or the Northwest. The trees must be kept in good condition, pruned, sprayed, and given the right of way in the soil. A large part of the orchards of Doniphan county are on ground where clean culture is impracticable, and in these orchards I think that the cover crop should either be devoted to the fertility of the orchard or, if removed, manure should be hauled upon the ground to make up the loss."

TOO LITTLE PRUNING.

"The neglect of orchards throughout the Middle West seems almost criminal to one who has inspected the intensive methods of other localities. There are many orchards in Kansas in which less money is spent on a hundred acres for the labor of pruning and other necessary work than is spent on an acre in some of the most successful sections in the Northwest. I hope that these large orchards may pass into the hands of companies with sufficient capital and nerve to handle them in a competent manner, as successful orcharding in Kansas must include pruning, spraying, and protection from frost."

The lack of packing and shed facilities is very noticeable throughout the northwestern part of Kansas. Many large orchards have absolutely no facilities for protecting even one day's picking from rain. A shed or barn will usually keep apples in fair condition for a few weeks when the temperature is not too high. Wherever there is a side hill, a cellar of concrete or stone may be built, and it will very frequently add many times its cost to the value of a single crop. The orchard sections must realize the necessity of co-operation, not only in marketing, but in spraying and in the purchasing of spraying materials and machinery, and also in the discussion of the best methods of storing.

APPLE JUDGING BY FIVE.

Prof. Ahearn and a Class Went to the Electric Park Fair.

Professor Ahearn accompanied five of the senior students in horticulture on an apple-judging trip to Kansas City, September 27. The Missouri

Valley Fair and Exposition was held there that week, and the class took the trip as preparatory work for the fruit-judging contest in St. Joseph next November. Teams from three states are entered in this contest, Iowa, Nebraska, and Kansas. The fair was a success. The boys who went from K. S. A. C. were: Luther J. Coblenz, Edward Isaac, Albert Yeager, Louis Williams, and John R. Cooper. They judged fifty plates of apples, placing them according to their merits into first, second, third, and fourth classes.

BUILD UP YOUR STRENGTH.

President Waters Urges Self-Control and Physical Exercise for Students.

In speaking to the students in assembly at the opening of college, this year, President Waters spoke of the importance of self-control, of submitting themselves properly to discipline, of strengthening their minds, of upbuilding their moral stature, of making of themselves competent, self-reliant men and women. This, he said, was as important as skilful hands or trained minds. He drew attention to the exceptionally fine facilities provided by the state for physical development.

"We have a handsome and thoroughly equipped gymnasium," the President continued. "The board of regents has employed a competent professor of physical culture. If you do not leave this institution, after a reasonable residence here, stronger physically, with a better knowledge of how to take care of your body, while working it to its full limit, you have neglected one of the very important parts of your education."

Less than one per cent of the people of America, President Waters said, are college trained. Still, it has been estimated, conservatively, that over sixty per cent of the positions of prominence and responsibility are held by this handful of college-trained men and women. Occasionally a man is able to achieve success without an education, or in spite of the lack of early preparation, just as a few persons attain old age although they

KANSAS WINS AT ROYAL.

THE AGGIE STOCK JUDGERS TOOK FIRST PLACE AND A \$500 CUP.

Students Cheered Like Football Rooters When News of the Victory Was Read by President Waters in Assembly—Ribbons for the Cattle, Too.

Five young men, students in the Kansas State Agricultural College, came back from the American Royal Stock Show in Kansas City Thursday wearing smiles. The cause was a \$500 trophy which they brought with them—the prize awarded for first place in the students' stock-judging contest. Students and faculty had heard of the victory and the team was welcomed warmly from all sides.

In student assembly Tuesday morning it was shown, plainly, that the football team isn't getting all the applause at the agricultural college. President Waters read a telegram from Kansas City which told that the Aggie team had won first place. The Auditorium rang with the cheers of the students. And immediately there was talk of meeting the team at the train and giving the members a rousing reception. That the teams of both Missouri and Iowa were defeated was most gratifying, for those two schools have furnished, for years, some of the best stock-judging teams in the United States.

The contest was close. The Aggie team worked hard for its victory. A whole day was taken for the judging and it was late at night before the contest judges announced the winners. The result was Kansas, 4087 points, Iowa, 4047, and Missouri, 4006.

In the individual standing Kansas men got third, fourth, fifth, ninth, and fourteenth places. A Missouri student won first and an Iowan second.

This is the second time Kansas has won the cup. In 1907, when the prize was offered for the first time, it went to Iowa, which lost it to Kansas in 1908. In 1909 Missouri took the cup from Kansas, and in the next year Iowa was again the holder. So far, only Kansas and Iowa have held the cup twice. When one school wins for



Where they learned stock judging.

have violated, during their long lives, many of the fundamental laws of health. "But the average person," said the President, "is neither a genius nor giant. He will need all the help he can possibly get."

A Compliment for the President.

In a letter to the *Chicago Standard*, of which paper he is a correspondent, Dean Brink, in speaking of the college has this paragraph: "President Henry Jackson Waters is the brilliant leader of this splendid body of young people. He came to this responsible position two years ago from the University of Missouri. From the day of his arrival to the present the whole institution and, indeed, the entire state have felt his presence as an inspiration to all that is best in intellectual and civil life."

He is the happiest man who can carry the golden thread of boyish enjoyment farthest along through the web of life.—Beecher.

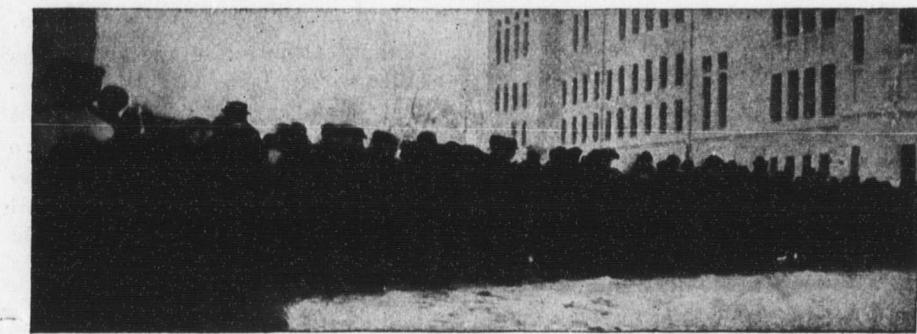
three consecutive years the trophy becomes the property of that school.

Here are the winners: L. E. Weckman, Horton; R. D. Laffin, Manhattan; Russell Dodderidge, White City; H. L. Smith, Hutchinson; A. M. Paterson, Manhattan. Substitutes were I. L. Fowler, Manhattan; George Kirkpatrick, Eureka; and H. P. Wood, Elmdale. The team was coached by T. G. Paterson, of the animal husbandry department. In December the team will enter a judging contest at the International Stock Show in Chicago.

The sixteen steers exhibited at the Royal by the animal husbandry department won ribbons for 3 firsts, 5 seconds, 2 thirds, and 1 fourth place.

Honey For Missourians.

The bee industry is becoming important in Missouri. There are 225,000 colonies of bees in the state and their annual product of 8 million pounds is worth nearly a million dollars.



On the way from chapel to Anderson Hall—and the "squeeze."

tions without danger of losing their lives. There is now a window in the Secretary's office where the post office was.

THE NEW PAVILION.

The construction of the stock-judging pavilion is progressing very rapidly. The walls are above the ground floor. It is hoped that this section of the new agricultural building will be ready to use by the winter term. But very little work is being done on the remainder of the hall. The masons will finish their work on the pavilion soon and then begin on the main section. This will be the east wing of Agricultural Hall. It will take more than a year to complete the building.

Dean Webster says it is expected to use the building for at least two months this term. This pavilion will be used for other purposes than stock-judging; in fact, it will be a general utility building for the college. Big sales will be held there, meat-cutting exhibitions will be given there, and the building will be used during the State Farmers' Institute, which is held here every winter, for exhibitions and for judging. The building is 100 x 116 feet. It really gives two pavilions, 50 x 100 feet. It will be possible to divide these and have four separate rooms for different classes in judging.

All of the sheds and lots north and east of the dairy barn have been removed. The space formerly occupied by the lots will be seeded to blue grass. The new building south of the dairy barn is not a veterinary hospital or a dissecting room, as the tables may have led you to believe. It is a calf barn, and some of the dairy experimental work, also, may be carried on there.

A CHEMISTRY ANNEX.

The Women's Gymnasium has been partly fitted up as a chemistry building. The west wing will be used as a laboratory. When completely equipped there will be lockers enough to accommodate 1098 students. Owing to insufficient appropriation it will not be possible to equip the building now. Even with this new addition the old

THE KANSAS INDUSTRIALIST

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PRES. H. J. WATERS Editor-in-chief
PROF. C. J. DILLON Managing Editor
DR. J. D. WALTERS Local Editor

Except for contributions from officers of the college or members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism, under the direction of Prof. Charles Dillon.

The typesetting and other mechanical work is by students in the school of printing, of which J. D. Rickman is superintendent. Both these departments are in Kedzie Hall.

Newspapers and other publications are invited to use the contents of the paper freely without credit.

The increasing demand for THE KANSAS INDUSTRIALIST makes it necessary to insist upon the payment of the regular subscription price, 50 cents a year, invariably in advance. No commission is paid any one for subscriptions, and no advertisements are accepted. The paper is sent free only to the alumni, to officers of the state, and members of the legislature. This rule will not be violated.

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SATURDAY, OCTOBER 14, 1911.

"WHAT CAN YOU DO?"

The attention of thoughtful readers is directed to the article in another column of this paper, written by a student of industrial journalism. This student was asked why he had decided to take a college course. Ordinarily the replies to this formal question are perfunctory. This young man gives most important testimony in an exceptionally big problem.

"I was asked what I could do," the writer says. "I found that my high school education had not fitted me for office work. I had to become a common laborer. I knew no trade."

Here is a concrete demonstration that the young man who expects to start anything, now days, must know how. You can't fool the world. For that matter, it never was easy to fool it, but it is becoming more difficult to do. It doesn't matter whether it is farming or banking or teaching or clerking; mechanical, electrical or civil engineering; architect or scientist; if you don't know your business and know it thoroughly you'll have to get out to make room for the man who does know it. Bricklayers no longer adjust their speed to the slowest workman on the job. The slowpoke has to change his gait or find another job. Where it used to take sixteen movements to lay a brick it now requires only five. That is efficiency. That is knowing how.

How did the Greeks chase the negroes out of the ancient and honorable occupation of shoe shining? By shining more shoes in less time, and doing it better than the negroes could do it—and keeping their mouths shut. True, the Greek makes much noise with the polishing cloth and he may burn your toes, so swiftly does he operate, but he gets the job done in double-quick time. And he never stops to quarrel with another Greek, and use your time doing it. Simple examples, perhaps, but pointing the way inevitably. The world is in a hurry. It wants its work done quickly and properly. If you can't do it, get out of the way. Not much sentiment in that, surely.

That was exactly the condition this student faced when he sought work in Denver. "Any man," he says, "could do my work." Wasn't that enough to send a self-respecting young American hustling back to Manhattan where he knew he could get the training he needed?

THE GRADUATE AT LARGE.

A graduate no longer proceeds to collect what the world owes him as soon as he leaves college. He realizes his indebtedness to his community and begins a life of service upon graduation.

Methods of teaching are different. A man or woman enters college with the chief ambition to learn how to make money. Before a degree is obtained these ideas give way to really big ones. While statistics show that about seventy per cent of the successful men in America are college men, very few of the great financiers received college training. A good college course will educate a man away from a life devoted to

money grubbing. It will give him an appreciation of the rights of his fellows. It makes a success of him because he is trained to attack every problem of whatever nature and work scientifically until the answer is obtained.

The community owes the graduate nothing other than giving him a fair-minded reception. He will fail in many attempts while he is trying to adjust himself to his surroundings. He comes from a community where everyone is striving to reach the same goal, and it will hurt him to find men of no ambition in his new sphere. By these he will be pointed out as an example of how the college ruins men. The truth is, every community needs this leavening process annually.

A graduate must adapt himself to conditions as he finds them, but not adopt them. His success will come not from a display of superior knowledge but from a display of superior living. And that is the method the efficient graduate pursues in seeking to benefit his community. An affection of wisdom is repulsive. And to live continually in and for a community requires more tact, knowledge, and determination than is required to make a hundred reform speeches.

The college graduate is all right. He may be flighty at the start, but it is safe to put your trust in him. He will furnish the new ideas necessary. He will aid in keeping the balance on the side. He will serve to interpret advanced ideas to the backward members, and he will be valuable in adapting those ideas to the needs of the community. Give him as free range as possible. There is always enough contrary ballast everywhere. O. W.

A BOOK ON JOURNALISM.

"The Practice of Journalism" is the title of a book issued recently from the press of the E. W. Stephens Publishing Company, Columbia, Mo. The authors are Walter Williams, dean of the school of journalism, and Frank L. Martin, assistant professor of journalism, at the University of Missouri.

"The Practice of Journalism" is the first book ever published on journalism that is designed to be of service to instructors and students in the teaching of the profession. The few books that have been written on the subject treat only individual phases of the profession. In general, this new work treats of newspapers of every class, their fields and organization; the Sunday newspaper, the business and printing departments, the preparation and writing of editorials, and the gathering, writing, and handling of news. Technical style has been avoided as far as possible with a view of furnishing a book useful to beginners and others.

Almost all books on journalism are useful in some respect to teachers of that subject. But in this instance two distinguished members of the craft have collaborated in producing a volume certain to be a welcome addition to every library, in college or newspaper office or study. The chapters on editorials and editorial style are particularly interesting and prove that although Dean Williams temporarily wandered far afield in seeking the Santa Fé trail, he retains in a large degree his established facility for entertaining his readers in other departments.

A STUDENT VIEWPOINT.

Why do city boys often choose farming as a life work? And why do they come to an agricultural college to study agronomy, animal husbandry, and kindred subjects?

One fact stands out prominently. The city does not offer so much chance for individuality as the country. Routine, system—these are the things that the factory worker and the bookkeeper and the clerk encounter in the city.

The clerk in a large mercantile house becomes a part of a great system that daily grinds out a certain amount of work. Routine, that is the story of his eight or ten hours of labor, six days in the week. He is a cog in a machine and can be slipped out and another substituted in its place at any time.

A GOLDEN TEXT.

This is the day which the Lord hath made; we will rejoice and be glad in it.—Psalms 118: 24.

Not that the city man has no chance to succeed. He has, if he shows exceptional ability. But the average worker, methodical and persevering, is very often a creature of environment.

Animal husbandry and agronomy offer opportunities to those who desire life in the open. Not only money, but also a certain degree of independence. And independence, as much as a human being can have of it and still amount to something, is dear to everyone. The clerk of the city is often poorly paid or else has little chance for advancement before him. When the reward comes—if it ever comes—he is too old to enjoy it.

Why do city boys go to agricultural colleges? Because they know that an education is an investment that repays principal and interest ten times. They have seen many college men in the city and know that education, if it really be education, and not absorbed learning that cannot be applied, is a benefit in any profession or life-work.

C. G. W.

A QUARTER-CENTENNIAL SOUVENIR.

Of more than passing interest to live-stock feeders and shippers is the announcement of the recent twenty-fifth anniversary of the founding of the great live stock commission firm of Clay, Robinson & Co., an event which the firm has fittingly commemorated by the publication of a "silver souvenir" pamphlet depicting the rise and expansion of the business since 1886. This book is a most beautiful specimen of the engraver's and printer's art, profusely illustrated and worked in two colors, with a specially designed silver embossed cover. It opens with fine portraits of the two original members of the firm, John Clay and Charles O. Robinson, who are still active in its management and control. The other partners, J. G. Forrest, F. H. Connor, and C. A. Kleman, are also shown. A brief but interesting sketch, entitled "After Twenty-five Years," traces the development of the firm from 1886 to 1911, and in doing this many an interesting sidelight and valuable historical fact are interwoven. From the official statistics presented in the book the reader learns that the business of Clay, Robinson & Co. has almost trebled in the last ten years, the annual cash turnover for 1910 being, in round numbers, 105 million dollars, against 37 millions in 1900.

A REST FROM FARMING.

A farmer can and should take an annual vacation. This may consist of travel or in camping out. The farmer should take his family on this vacation. The housewife needs rest and enjoyment as well as her husband.

Travel should include the visiting of such places as Yellowstone Park and other noted places in Wyoming, Colorado, and Utah. Every farmer could not take such a trip. A less expensive and very enjoyable method of spending a vacation would be to pitch a tent beside some cool mountain stream in Colorado or Wyoming. The family could enjoy the cool mountain air and spend the time in sleeping, reading, hunting, and fishing. If a man cannot afford this trip, he could camp out on the bank of some stream a short distance from home for a week or two, but this method is not preferable to the other.

The most suitable time to take a vacation is after harvest, when the hired help can take care of the farm. The preparation of the seed-bed for the fall crops can be carried on by the hired help. The farmer and his family will return to the farm refreshed in mind and body and will have a more ambitious spirit for the work of the fall.

G. E. M.

WHO HAS THE PURSE?

A correspondent asks, "Who should have the purse on the farm—father or mother?"

In a truly happy married life, the question of who will carry the purse will not arise: for both will carry it. No woman can be happy when she is compelled to ask for every cent she spends. The asking does away with the independent life which every woman must have.

There are ways in which a woman with a little spare time may make pin money on the farm. Build or have built a good hothouse and grow early vegetables for the market, or choice flowers for the neighborhood. There is always a demand for flowers. When a woman shows that she is interested in the welfare of the family, it will cheer the man of the house very much. The keeping and care of the family should never be one sided.

L. C.

USELESS WITHOUT A TRADE.

Another Contribution to the Series, "Why I Came to College."

[This little piece is a valuable contribution at first hand from a young man who learned, with hard knocks, that a man must have a quick and satisfactory answer nowadays to the important question: "What can you do?"]

In every young man's life comes a period when he has a desire to travel, to leave the farm, to get away from the old town and see the world. This period in my life came shortly after I was graduated from the high school. I went first to Denver, where I proceeded to seek employment. One question always confronted me: "What can you do?"

I was master of no trade; my education had not fitted me for work in an office, so I had to be contented as a common laborer. Here I came in contact with union men who would not let me see them work for fear of giving me a clue to their trade. My wages were scarcely sufficient to give me good lodging. Why? Because anyone could do my work.

One year of this life proved to me that without a trade or technical education I belonged with the common unskilled laboring class.

These are some of the reasons I am in college to-day. I chose the agricultural course because there is a demand for scientific agriculturists, not only in government employment but on the farms. So here I am. I intend to learn how to do something and do it right.

J. P. S.

HE'S THE BUSINESS MANAGER.

A New System of Bookkeeping Being Devised for the College.

The college, hereafter, is to have a business manager, or financial secretary. J. C. Christensen has been appointed to the post. He is to devise a permanent system of bookkeeping suitable for all departments and to establish a better method of registering and assigning the students. Mr. Christensen is a graduate of the college. Until recently he was state bank examiner for a part of Kansas. At present Mr. Christensen is visiting many of the larger colleges and universities of the United States to study their methods.

THE LOYAL CLASS OF '09.

A Present of \$50 Received for the Athletic Field Fund.

The class of 1909 has sent \$50 to President Waters for the athletic field fund. The letter was signed by Amanda Kittell for the class.

"I am enclosing draft for \$50," Miss Kittell said, "which is to be added to the Kansas State Agricultural College athletic field fund. The class of 1909 has decided the money can be used for no better purpose."

Five Chinese Boys Are Students.

Five Chinese boys have come 3500 miles to spend five years studying in the Kansas State Agricultural College. These boys belong to the "upper class" of Chinese. Their homes are in Honolulu, but their parents are full-blood Chinese. They were educated in an American school in Honolulu, speak good English, and are fully Americanized. Albert Mun Yim will take the civil engineering course; Bung Chew Choy will study mechanical engineering; Kim Ak Ching, Wai Kai Chang, and Dai Song Chang will take agricultural courses.

October's Tapestry.

By the mountain stands October,
Like a weaver brown and old;
For his warp he uses sunbeams—
Threads of palpitating gold;
And the loom spread out before him
Is the forest dim and green,
While his shuttle, plowing swiftly,
Is the wind of autumn keen.

For his woof he chooses colors—
Amethyst and purple lost
In the blue of smoke and shadows,
In the gray of early frost;
Vivid carmine, saffron, amber;
Faded tints the summer left;
Mauve and lilac softly blended—
All these form October's weft.
All day long I hear the music
Of his shuttle and his loom;
All day long I watch him weaving
Till the stars begin to bloom.
And the figures on his fabric,
As each day they brighter grow,
Seem the forms and flow'r-like faces
Of the Jones I used to know;
—ALICE E. ALLEN in *Lippincott's*.

SUNFLOWERS.

The endurance of the inequalities of life by the poor is the marvel of society.—*Froude's Caesar*.

God bless the man with an idea. Because you have been doing a thing one way for thirty years is no reason to continue in that rut.

When the people complain, said Mirabeau, the people are always right. This applies, particularly and especially, to street-car service.

We have only this to say: For a Normal team, the activity of the young men who visited this college last Saturday was the most abnormal yet experienced.

China, we learn from the esteemed *Literary Digest*, is exporting millions of eggs. This is not news to us. We have used China eggs for years in the nests and prefer them to door knobs.

We draw attention, modestly, to the fact that in our issue last week we refrained from saying anything about Robert T. Crane, of Chicago. But we desire Mr. Crane to understand clearly, once and for all, that we shall practice this restraint only a little while. There are limits.

Rachel.—After trying twenty-three varieties of deadly poisons, all guaranteed—falsely—to kill water bugs and roaches, we are convinced that nitroglycerine is the only certain means of killing them. The bugs should be held firmly between the thumb and forefinger, preferably in the right hand, and the remedy applied with a small spoon. Repeat treatment as long as any bugs remain. You might try dynamite, also.

A SCHOLARSHIP IS FOUNDED.

Prof. McKeever Announces a Gift from De Vere Rafter.

A scholarship has been announced by the department of philosophy. It is to be called the De Vere Rafter Scholarship. It is a research scholarship of social psychology to be given to some senior student who will visit a certain number of country homes to make a survey of the home life of Kansas boys and girls.

The founder of the fellowship is De Vere Rafter, a young business man, secretary of the Rafter Loan and Mortgage Co., of Holton. He has been made lieutenant colonel of the K. N. G. attached to the governor's private staff. He has known Professor McKeever for a number of years and is greatly interested in his department.

Books Received.

The following books have been received, either in the office of THE KANSAS INDUSTRIALIST or in the college library, since June 15. They are hereby acknowledged, with thanks:

Meadows and Pastures, by Joseph E. Wing, the Sanders Publishing Company, Chicago. Penn College Report for 1909-1910.

Mineral Resources of the United States, Vols. I and II, United States Geological Survey. Vols. I to VIII. Hinds' Precedents of the House of Representatives; Vols. I to IX. Tariff Hearings; annual report, American Historical Association, 1901 and 1907. Vols. I and II, both years: various state papers and documents, bulletins, and reports, for all of which the college is grateful to W. A. Calderhead, M. C., Marysville, Kan.

The Practice of Journalism, Williams and Martin.

Heart's Delight Farm, Chazy, N. Y., W. H. Miner; C. E. Hamilton, manager, a graduate of this college.

I would rather be able to appreciate the things I cannot have, than to have things I am not able to appreciate.

ALUMNI NOTES.

W. A. Boys, '04, and Dovie (Ulrich) Boys, '03, and baby were college visitors Monday.

Seats for the lecture course may be reserved next Monday. The old plan of "first come, first served" will be used.

Miss Clara Pancake, '03, has charge of domestic science and domestic art in the Colorado State Preparatory School at Boulder.

Leon Swingle, a junior student last year, left for Washington, D. C., last week. He has a place in the Department of Agriculture.

Mr. and Mrs. C. B. Kirk, members of the '06 class, announce the birth of a boy, September 16. Mr. and Mrs. Kirk live in Kansas City.

A. C. Monahan, an inspector connected with the U. S. Bureau of Education, was at the college this week. He is an old friend of M. F. Ahearn.

Mr. and Mrs. J. B. S. Norton, of Hyattsville, Md., announce the birth of a daughter, October 3. Mr. Norton was graduated with the class of '96.

Claude Conner, '09, and Miss Amanda Kittell, '09, were married in Topeka, October 10. The guests from the college were Edith Jones, Marie Coons, and Maida Shultz.

A. J. Reed, '10, and Miss Verna Combs were married in Manhattan September 27. Miss Combs was a short-course student in 1910. Mr. and Mrs. Reed will live in Lexington, Ky.

Gene Blair, '10, visited friends at the college this week. He was on the way from Colorado to San Antonio, Tex., where he is a scientific assistant in pomology in the government service.

E. P. Johnston, of the public speaking department, caught a turkey buzzard last week. It is a real live one of the chicken-eating type. It is now "at home" in a glass cage on the second floor of the college museum.

The dairy school of the Oregon Agricultural College has just added E. R. Stockwell, K. S. A. C. '11, to its teaching corps. Since graduation Mr. Stockwell has been touring Wisconsin, studying the methods of dairy husbandry in practice there.

"Hunting Bears in Alaska" is the subject of a story in the current Kansas Magazine by Milton D. Snodgrass, '06. He tells of killing his first bear and says he "hollered" just the way he did when "Mike's" Aggies beat K. U.

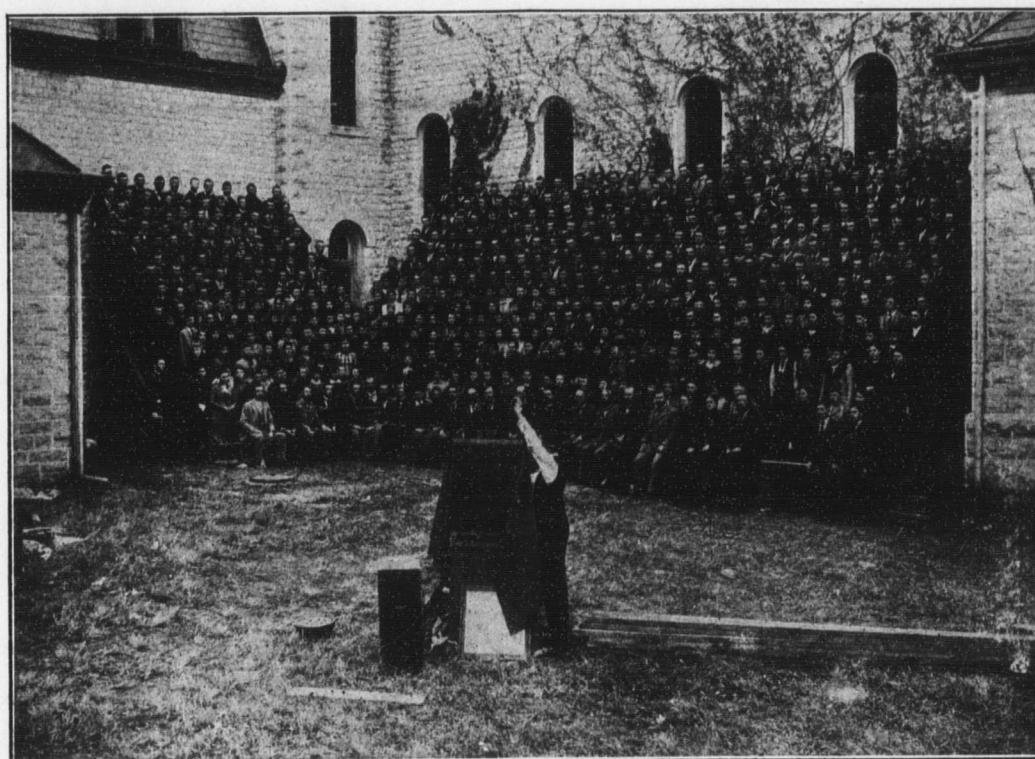
Oscar Erf, formerly in charge of the dairy department of the college, stopped in Manhattan last Sunday to visit friends. Mr. Erf is connected with the school of dairying at Ohio University. He was on the way home from California, where he has been doing some experimental work in dairying for the U. S. Department of Agriculture.

The Kansas City Alumni Association of the K. S. A. C. held its annual picnic at Budd Park, Saturday, September 3. There were about fifty members and former students present besides the children. Prof. Albert Dickens and wife and Miss Ella Weeks of the college Faculty were guests. The association would be very glad to get in touch with all alumni and former students living in Kansas City and vicinity. Please send names to Arthur Helder at 17 East Thirty-Second street, president, or Eusebia M. Thompson, 3231 East Ninth street, secretary.

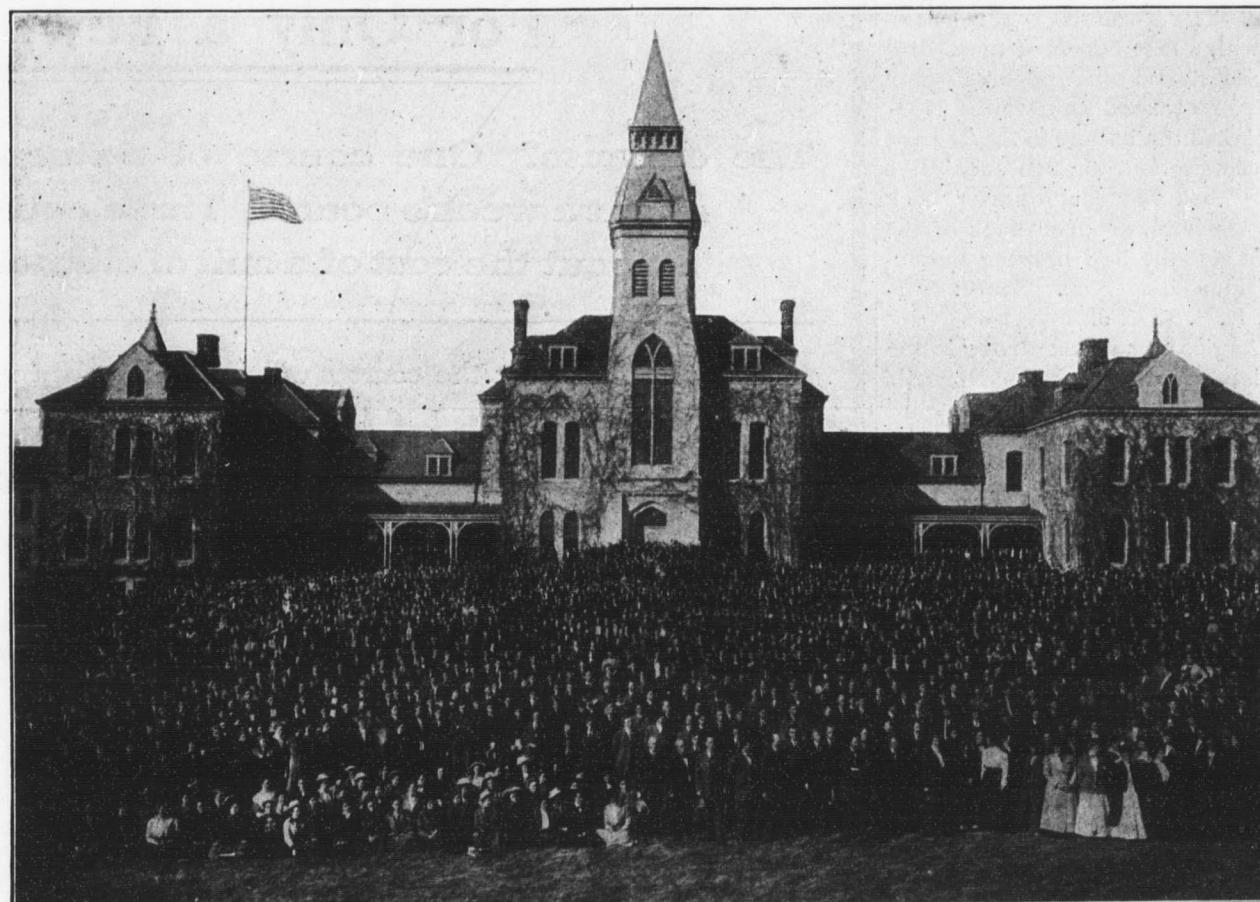
The following alumni were present at the picnic: H. C. Rushmore, '79, and wife, L. A. Deitz, '85, and wife, Eusebia (Knipe) Curtis, '90, Bertha (Kimball) Dickens, '90, Sam Van Blarcom, '91, and Kate (Stingley) Van Blarcom, '91, Albert Dickens, '93, May Harmon, '93, Eusebia (Mudge) Thompson, '93, Horace G. Pope, '94, and wife, Winnie (Romick) Chandler, '94, Carl D. Adams, '95, and wife, Dora (Thompson) Winter, '95, Frank Yeoman, '98, Ary (Johnson) Butterfield, '98, A. T. Kinsley, '99, Clarence Chandler, '00, Anna (Smith) Kinsley, '01, R. F. Bourne, '03,

The Changes of 20 Years.

Pictures That Show More Strongly Than Words, How The Agricultural College Has Grown.



Students and Faculty in 1890.



Some of the students in 1911.

Arthur Helder, '04, Earl J. Evans, '06, Florence (Sweet) Evans, '07, Marshal Elsas, '07, Winona Miller, '11, O. E. Williams, '11, Myrtle Haynes, '11, Clif J. Stratton, '11, and former students: Margaret Williams, Ruth Rowland, W. M. Deitz, Florence Deitz, Stella (Preston) Taylor, Elizabeth Kraemer, Marshall Chandler and wife, and Lockhart (Harmon) Zimmerman.

Visiting alumni who registered in Cedzie Hall during Commencement week were:

Clement G. Clarke, '88, Minneapolis, Minn.; R. M. Platt, '10, Aetna, Kan.; L. B. Mickel, '10, Soldier, Ks.; H. W. Avery, '91, Wakefield, Ks.; C. Jeanette (Perry) Thomas, '88, Racine, Wis.; Alice (Perry) Hill, '03, Walla Walla, Wash.; Lillian (St. John) Williams, '91, Kansas City, Kan.; J. S. Montgomery, '07, St. Paul, Minn.; S. Van Smith, '10, Ft. Collins, Colo.; Samuel S. Cobb, '89, Wagoner, Okla.; Leroy Rigg, '01, Kirwin, Kan.; H. L. Cudney, '09, Belaire, Kan.; F. B. Morlan, '00, Courtland, Kan.; H. C. Rushmore, '79, Kansas City, Kan.; L. C. Aicher, '10, Caldwell, Idaho; Inez (Manchester) Allison, '88, Florence, Kan.; T. W. Allison, '98, Florence, Kan.; C. I. Weaver, '06, Chicago, Ill.; Laura (Lyman) Weaver, '06, Chicago, Ill.; Grace (Smith) Graves, '08, Greenwood, Mo.; R. R. Graves, '09, Greenwood, Mo.; Harlan Deaver, '10, Sabetha, Kan.; Raymond W. Brink, '08, Moscow, Idaho; Margaret Justin, '09, Clarkson, Mo.; Odell Wilson, '09, Harper, Kan.; Myrtle Osins, '09, West Plains, Mo.; Ethel Moseley, '09, Alma, Kan.; Wilma Evans, '09, Goodland, Kan.; Maria C. (Hopper) Getty, '86, Downs, Kan.; Helen H. Halm, '08, San Marcos, Texas; Mac MacLeod, '10, Valley Falls, Kan.; Marion F. Leisure, '77, La Cygne, Kan.; Bessie L. Tolin, '08, Soldier, Kan.; Marie R. Bardshar, '08, Mt. Hope, Kan.; Mabel E. Davison, '10, Michigan Valley, Kan.; Georgiana Westomeyer, '10, Jewell, Kan.; Clara M. Westomeyer, '10,

Bethel, Kan.; Matah M. Schaeffer, '10, Jewell, Kan.; W. F. Turner, '10, Tonganoxie, Kan.; C. W. Simpson, '10, Cawker, Kan.; J. A. McKenzie, '01, Solomon, Kan.; J. W. Harner, '00, Carrizozo, N. Mex.; George Wildman Smith, '93, Kansas City, Mo.; C. C. Jackson, '99, Westmoreland, Kan.; Amy (Elder) Bull, '08, Yankton, S. D.; Stella L. Ballard, '10, Washington, Kan.; Christine M. Heim, '10, Lincoln, Kan.; Lillian M. Lowrance, '10, Thayer, Kan.; Susan Davies, '10, Arkalon, Kan.; Minnie Conner, '10, Mitchell, Kan.; Charles M. Zoller, '10, Kirwin, Kan.; L. Pelham, '07, Hutchinson, Kan.; Winifred A. Dalton, '06, St. George, Kan.; Franklin A. Adams, '09, Maple Hill, Kan.; Edith Forsyth, '06, Dwight, Kan.; F. M. Linscott, '91, Farmington, Kan.; Susti (Hall) Linscott, '93, Farmington, Kan.; Jessie M. Ballou, '05, Delphos, Kan.; May (Harris) Burt, '05, Denver, Colo.; Mamie (Alexander) Boyd, '02, Phillipsburg, Kan.; Maude (Sable) Rogler, '01, Bazaar, Kan.; Bird E. Secret, '93, Randolph, Kan.; Richard F. Bourne, '09, Kansas City, Mo.; E. H. Freeman, '95, Chicago, Ill.; Emily (Smith) Skinner, '06, Lawrence, Kan.; J. T. Skinner, '04, Lawrence, Kan.; H. R. Groome, '05, Jewell City, Kan.; P. K. Symms, '01, Troy, Kan.; R. E. Spriggs, '09, Rochester, Minn.; Charles J. Willard, '08, Bradford, Kan.; W. S. Davidson, '10, Michigan Valley, Kan.; Elmer W. Jones, '09, Herington, Kan.; Schuyler Nichols, '98, Herington, Kan.; Adelaide Strite, '01, Spokane, Wash.; Arthur J. Rhodes, '05, Topeka, Kan.; H. M. Cottrell, '84, Fort Collins, Colo.; Elva Sikes, '09, Leonardville, Kan.; Grace E. Umberger, '05, Hymer, Kan.; Mabel McKenzie, '10, Solomon, Kan.; May (Moore) Dakin, '98, Wichita, Kan.; John U. Higinbotham, '86, Chicago, Ill.; Jessie Wagner, '00, Enterprise, Kan.; May Secret, '09, San Luis Obispo, Cal.; Josephine (Wilder) McCullough, '98, Delavan, Kan.; Rena (Helder) Morse, '91, Olathe, Kan.

TO REPRESENT K. S. A. C.

President Waters Asks Alumni to Attend Inaugurations of University Presidents.

The Kansas State Agricultural College has been invited to participate in the inaugurations of three university presidents this fall. President Waters has appointed the following alumni to represent the college on these occasions:

Dr. Clement G. Clarke, class of '88, who delivered the baccalaureate sermon here last spring, will represent the agricultural college at the inauguration of George Edgar Vincent as president of the University of Minnesota, October 18.

For the inauguration of Dr. Lemuel Herbert Murlin as president of Boston University, Frank Albert Waugh, class of '91, professor of horticulture and dean of the summer school in the Massachusetts Agricultural College, Amherst, has been designated as the college representative.

At the inauguration of Elmer Ellsworth Brown as chancellor of New York University, November 9, Dr. Paul H. Fairchild, class of '86, son of Ex-President Fairchild, will be the college representative.

Not Dutch.

Dutch clocks are not made in Holland, but in Germany, and the name Dutch is simply a corruption of the German word Deutsch, meaning German.—*Children's Encyclopedia*.

THE WHY OF THOSE BUGS

AN EXPERT DESCRIBES THE CLOUD OF INSECTS THAT VISITED KANSAS.

It Wasn't One Species, Mr. McColloch Says, But Thirty-Five That Caused Alarm But Did No Damage.

Kansas had a "visitation" the evening of September 14, last, that will be remembered along with "the grasshopper years." It was bug night in Kansas. The southern part of the state, especially, was taken by billions of winged insects, and in many towns business was suspended and traffic stopped while the fog of bugs stayed.

AN EXPERT INVESTIGATED.

Where all the insects came from and why they should choose one particular night for a flight, was everybody's question. Fortunately a representative of the entomology department of the agricultural college, J. W. McColloch, was in the bug-stricken district that evening, and he spent the night investigating. His report was received at the college a few days ago. It was not the flight of a certain species that night, Mr. McColloch discovered. From the specimens taken he identified more than thirty species representing nineteen families.

Speaking of the insect uprising, Mr. McColloch said: "Insect flights happen every year, but not since 'grasshopper years' has one of such magnitude been seen in Kansas, and it is rare indeed to have so many species participating in a single flight. Already this year flights of the corn ear-worm moths and of grasshoppers have been reported, but in each case these insects came alone. At Conway Springs, where I was stationed, over thirty species were taken during this recent flight, and it is highly probable that several more species were overlooked."

WERE KANSAS BUGS.

"From all indications, the flights were local in their origin. That is, the insects came from the fields surrounding the towns and not from any great distance. The fact that many of the insects observed in this flight are ones that are not given to long flights lends proof to this view. Aside from this, these insects are all common and may be found in large numbers at any time in the fields."

"That these flights were reported over such a large area is due, probably, to the similarity in weather conditions. The climatic conditions were much the same wherever these flights were reported. Another factor which points to the local origin of these flights is that they occurred in the various towns at about the same time in the evening. The flight followed a day of intense heat accompanied by a hot southwest wind. Clouds formed in the evening along the northern horizon, and at the time the flight began the air was slightly humid and a perfect calm prevailed."

LIKE A FOG.

"The approach of the insects was like a rising wind and in some places they resembled an approaching dust storm. At Conway Springs the insects began to congregate around the lights about nine o'clock and within half an hour the flight had reached its maximum. The air was so filled with the pests that it seemed as if a heavy fog had settled over the town."

"A green stink bug and a small leaf hopper were the predominating species and were present all night. A tiger beetle and three species of ground beetles could also be found at any time during the night in large numbers. The other species came and went, few of them being present for more than an hour at a time. Nearly all of the insects making up this flight are either non-injurious species or do a type of damage which is not noticeable. Of the recognized injurious species observed, the grasshoppers were probably the most numerous. Other injurious insects in numbers sufficient to attract attention included chinch bugs, corn ear-worm and cutworm moths, and June bugs."

WITH TOO MANY CLUBS.

INSTITUTES AND WOMEN'S AUXILIARIES FILL THE FARMERS' NEEDS.

If Rural Citizens Joined all the "Uplift" Organizations Proposed by Queer Persons, They'd Have no Time for Work.

A mighty change has come over Kansas in the last few years in the way of education. Six years ago, for instance, cooking and sewing were taught in only two or three schools—that is, domestic science. Now it is a part of the program in more than one hundred schools. Girls are learning to cook, cook right, which means fewer stomach troubles, real or fancied, and, consequently, better tempered men in the homes. They are learning to make their own clothes, too, which means economy and common sense. They have found real things to do—not drudgery, mind you, places in the world that they can fill. The result of this better educational standard, in these branches, the movable schools, the girls' clubs, women's auxiliaries to the farmers' institutes—organizations having more than 3500 members—the result of it is an increasingly large number of happy homes, more competent teachers in high schools and rural places, and a constantly growing attendance at the Kansas Agricultural College where these things originated and where they are taught.

THEY'D BE BUSY.

When you look over a fine state like Kansas, see the constant activity of its institutions for human betterment; when you consider the millions spent annually by the state and by the federal government to improve living conditions and give the people a better agriculture—when you think of these things you can't help wondering what induces the superfluity of organizations in every part of the country—for Kansas is no more noteworthy in this last respect than any other states. The truth is—and any thinking person can grasp it—that if farmers or their wives attended meetings of the numerous organizations and societies and clubs under way or proposed for their supposed benefit, the chores never would be done up and the live stock and the fields would suffer. In a way, it is the story of the city over again. It is true of Kansas City, of Topeka, Hutchinson, Salina, or any other town you may name. If business men joined all the improvement associations and all the clubs for this and that and the societies and unions that pester the life half out of them, they would never be at home a night and the divorce courts would work overtime. If men and women would leave these things to the established sources which have been handling them successfully for years, vastly more would be accomplished.

A FEW SUGGESTIONS.

Recently an editor whose name is widely known advocated a Stock Growers' Association for every county in the state; another wants an Alfalfa Club in every county; another would have a Fruit Growers' Association; another a Good Roads Association; another a Dairy Association; another a Swine Breeders' Association; there are Wheat Growers' organizations and Corn Growers' societies, and not long ago a group of bankers in Chicago organized a National Soil Fertility League. About all these mushroom growths amount to is to worry the farmers and their families, sell typewriters, and pester the newspapers.

Every single one of the projects, industries, or subjects referred to in the platforms of these pseudo improvement organizations has been urged, discussed, and is now being successfully advanced by the state's paid employees at the agricultural college. For instance—citing something concrete which every one who reads knows about—more than 5000 boys are annually engaged in corn contests that are conducted by the college. Elementary agriculture is taught in more than 200 high schools and in every rural school in the state as a result of the college's agitation, in part, and certainly with the books written by its

staff. For six years the college has had experts talking soil fertility and alfalfa and other crops, and in that time the institutes in the 105 counties have increased from nothing to 340. The alfalfa acreage has more than doubled in that time. These institutes have nearly 15,000 members, and last year there were more than 100,000 attendances. Every program is prepared at the college and two lecturers attend every annual meeting. That doesn't look as if the farmers were neglected or neglectful, does it?

But the foregoing are only a few instances. The farmer is not being forgotten. His family is being entertained. His wife and his daughters are keeping watch. If you doubt it, the high school and college and university and normal school enrollments ought to convince you.

AGGIES LOST A GAME.

The State Normal Won Last Saturday With a Field Goal.

For the first time in six years the Kansas State Normals scored on the Kansas Aggies and won the game October 7, score 3 to 0. The game was one of the hardest fought contests that Manhattan enthusiasts have seen. A drop kick from the 25-yard line in the second quarter gave the Normals 3 points—and the game.



The Aggies were on the defensive in the first quarter. The Normals began with a fast bunch of open field plays and played the Aggies off their feet. In the second quarter the Normals worked the ball up to the 20-yard line, but were held for two successive downs. Then Morgan, quarter back for the Teachers, dropped back of the line and sent the ball between the uprights on a drop kick. Score: Normals 3, K. S. A. C. 0.

The Aggies came back strong in the last quarter and forced the Normals to take the defensive throughout the final session. Practically all the gains by the Aggies were made on straight-line plunges. In the last quarter the Aggies twice worked the ball up to within striking distance only to lose possession of the ball. Once, with the ball on the Normals' 25-yard line, Howenstein was sent in to kick a field goal. The pass was poor and Howenstein was tackled before he could get away with it. The game ended with the ball on the Teachers' 32-yard line.

Captain Holmes played a star game for the Aggies, his fierce tackle swings tearing holes in the opponent's line. Hehn and Hartwig also showed up well. Morgan and White played brilliantly for the Teachers. The line-up:

K. S. A. C.	STATE NORMAL
Feipps.....	Hepworth
Wehrle.....	Scott
Holmes.....	Baustain
Burkholder.....	Merrill
Loomis.....	Peterson
Stahl, Hopper.....	Berry
Vale, Collins.....	Hay
Prather, Howenstein.....	Sidorfsky
Hehn.....	Harridan
Young.....	White
Hartwig, Schuster.....	Morgan
Officials: J. C. Masker, referee; L. J. Quigley, umpire; Lieutenant Erwin, field judge; Lieutenant Harbold, head linesman. Time of quarters, 13 minutes.	Marlowe

A "BEAT K. U." CLUB.

The Aggie Rooters Have Determined to Win From the University, October 21.

An organized attempt to win from K. U. will be made by supporters of the Aggie football team. A "Beat K. U." club has been organized. The plan for the club was made at a meeting of the Rooters' Club last week. Coach Lowman told the rooters how much the team appreciates side-line support. But organized rooting, he said, was needed.

"Jake" Holmes, captain of the team, also spoke. The team has a hard schedule, he said, and to make a good record this season it must have all the support possible.

Interest in rooting has grown since the first game, last Saturday. The girls, too, are reorganizing their club of last year.

Can't Go to College?

Then the Kansas Agricultural College Will Come to You

Many Kansas people and persons in other states are taking the correspondence courses offered by the Kansas State Agricultural College. They study at home. A few minutes

You May Study These

Elementary Agriculture
Farm Crops
Soils
Highway Construction
Farm Machinery
Farm Drainage
Animal Breeding
Stock Feeding
Fruit Growing
Vegetable Gardening
Economic Entomology
Farm Motors

every evening is enough. The college sends instructions and questions and tells what textbooks to get and where to get them. When papers are sent in an expert grades them, points out the mistakes and returns the papers.

A correspondence course can help the teacher to teach; the farmer to farm; the orchard-

ist to grow fruit; the housekeeper to cook and sew; the contractor to build houses and bridges, and the student to gain college credits.

Or These

Landscape Gardening
Floriculture
Forestry
Dairy Farming
Joinery
Dairy Manufacturing
Rural Sociology
Poultry Husbandry
Domestic Science
Elementary Sewing
Concrete Construction

For Only a Few Dollars

The expense? One course of sixteen lessons will cost only about a week's board. Three courses, lasting a year, about the cost of a suit of clothes or a good dress

Any questions about the courses will be gladly answered if inquiries are addressed to

Director College Extension, Box G.

Kansas State Agricultural College, - - - Manhattan, Kansas

THE BAND PLAYS ON.

Burr H. Ozment, the New Leader, is pleased with the Outlook.

And the band plays on. Burr H. Ozment, the new band leader, is hard at work. More candidates reported than there were positions and some had to be refused.

"I certainly am pleased with the outlook," Mr. Ozment said, yesterday. "I like the spirit the boys have shown. Most of the old men are back and will be in the band. We expect to do both concert and military work. The last Saturday in every month we will give a concert in student assembly. Of course we will be out for all the football games and help things along. I am satisfied that we will have a successful year."

Heretofore the college band has been a military organization solely. The concert work this year will be a pleasing feature. The band practices four days in the week and drills with the cadet corps at dress parade. The band will number thirty-six pieces this year. The instrumentation will be more evenly balanced. Practice work has begun.

Mr. Ozment has been the band leader at the University of Missouri and has turned out good bands. He also will give lessons in band instruments. A large room in the new gymnasium has been set apart especially for the band.

HOW TO GET BETTER EGGS.

The Subject of a Paper Read by Otto Maurer to the Science Club.

Otto Maurer, assistant in bacteriology, read an exceedingly interesting paper, Monday night, before the Science Club, describing some of the re-

sults of his egg investigations. A part of this paper, dealing with non-scientific matters, is to be published shortly. It contains valuable information and advice which every farmer should have. Mr. Maurer is giving painstaking attention to the keeping qualities of eggs, and is trying to devise ways in which they may be handled by farmers and other producers more carefully, to reduce the loss from decomposition.

The club's meeting was the first of the season, and the last of the year. The program for 1911-1912 has not been announced. Although the weather was far from pleasant, the attendance was good. President Waters presided. Professor Reed was to have read a paper, but was prevented by business.

PUT DATES ON THE EGGS.

Proof of Freshness Certainly Commands Better Prices in the Stores.

Eggs, dated and pedigreed, played an important part in a course in incubator practice last spring. The eggs were dated and none older than ten days was used. Dated eggs bring a higher price than that paid for produce that has no record.

In the incubator practice the boys looked at the machines three times a day, each visit requiring from five to fifteen minutes. The temperature must not exceed 106 degrees, and this can not be endured long. As the heat of a hen's nest is about 104 degrees, the temperature then must be between 102.5 degrees and 104 degrees. A high temperature early in incubation is more disastrous than after the eggs have been under incubation a week. A temperature of 110 degrees will kill chicks.

THE BIG DAIRY SHOW.

A Chance for Dutch Belted Cattle in the Chicago Exhibit.

Important action was taken at this month's meeting of the board of directors of the National Dairy Show. Plans for leading features of the approaching show in Chicago, October 26 to November 4, were approved and methods to round out the exhibition were discussed.

Premiums for Brown Swiss and Dutch Belted cattle were increased twenty per cent, and there was added to the classification a Breeders' Cow Herd, open to the best ten cows two years old or over. This is open to all breeds. Cows entering this contest must be bred, but not necessarily owned, by the exhibitor, who, if he be fortunate, will receive a thousand dollar trophy and cash prizes of \$250 and \$100.

There will be on exhibition a model dairy barn, and this, with the government's elaborate photographic trips through the leading dairy districts, will round out the agricultural architecture so that the national show, this year, will have the best exhibit in this line ever attempted.

Tin Conserved.

Five thousand tons of tin were recovered last year "from the dump"—that is to say, from old tin cans, bits of solder, and similar refuse. It was worth at least three million dollars, and since tin—considering its manifold uses—is not especially abundant, it represents a very genuine conservation of resources.—*Youth's Companion*.

Burn all scrap papers, coffee grounds, egg shells, and sweepings.

THE KANSAS INDUSTRIALIST

Volume 38

Kansas State Agricultural College, Manhattan, Saturday, October 28, 1911

Number 3

HONOR TO HARRIS' NAME

A MEMORIAL OF BRONZE AND GRANITE UNVEILED THIS AFTERNOON.

In Front of Fairchild Hall, Edwin Taylor, for the Board of Regents, Accepted the Tribute of Friends.

The handsome memorial to William A. Harris in front of Fairchild Hall, was dedicated, this afternoon, in the presence of a distinguished company. A guard of honor, formed of college cadets, stood in a hollow square about the shaft, their pieces at the order, while the chosen speakers stood directly beside the shrouded pedestal. Old friends, social and business, old comrades, hundreds of students, and almost every member of the college faculty and instructional staff were present to take silent part in the ceremonies of honor. The company included several guests, to whom the ceremonies must have meant much: the eldest son, Page Harris, general manager of the Texas Pacific railway, whose home is in New Orleans, his eldest son, Monroe, the widow, Mrs. W. A. Harris, and a daughter, Mrs. Isabel Byrne, of St. Louis.

While distinctly formal, the ceremonies were as simple as it was possible to have them. When the company had assembled, the band played "America." After this came a prayer by the Rev. A. E. Holt. President Waters then introduced Colonel J. F. True, of Topeka, chairman of the Harris Memorial Fund, who, in turn, presented the remaining speakers. The memorial was accepted for the board of regents by Edwin Taylor, a member. This was the order of the program:

Music, "America".....College Military Band
Prayer.....The Rev. A. E. Holt
Introduction.....President Waters
Chairman.....J. F. True, Topeka
Address.....J. G. Waters, Topeka
Address.....B. O. Cowan, Chicago
Secretary American Short Horn Association
Address.....Alvin Sanders, Chicago
Editor, *The Breeders' Gazette*
Unveiling and Acceptance of the Memorial
for the Kansas State Agricultural Col-
lege, representing the Board of Re-
gents.....Edwin Taylor, Edwardsville, Kan.
Music, "The Triumph of Old Glory".....College Military Band

The actual unveiling of the memorial was done by Monroe Harris, grandson of Senator Harris.

In his introduction President Waters, speaking for only a moment or two, emphasized the importance of character building as shown in Senator Harris' life. To live to deserve such tribute, he said, was worth far more than all the wealth the world could give. It would outlast gold and precious jewels. It was greater than the power of potentates. But Senator Harris, the President said, had done far more than build a fine character. He had done things the world needed done and he had done them so well that they would be long remembered.

Col. J. F. True, of Topeka, chairman of the Harris Memorial Fund, was then introduced. Colonel True spoke feelingly of his long friendship for Senator Harris, of his services as a soldier, statesman, and as a breeder of fine cattle at Linwood Farm. Capt. J. G. Waters, of Topeka, followed Colonel True with an eloquent eulogy of Senator Harris and was, in turn, succeeded by B. O. Cowan, of Chicago, secretary of the American Short-Horn Breeders' Association. Mr. Cowan told succinctly why Senator Harris had become famous for his shorthorns, and how he had established Linwood Farm. Mr. Cowan's address was exceedingly interesting to many persons to whom this part of Senator Harris' history was chiefly hearsay.

Senator Edwin Taylor, a member of the board of regents, was then introduced and formally accepted the memorial for the college. He said in part:

"By direction of the board of regents and in its behalf, I accept, for

the Kansas State Agricultural College, this memorial of our late fellow-member, Senator William A. Harris. In his death the college met a heavy loss.

"Senator Harris was unusually well equipped for the duties of regent, which he had recently assumed. His scholarship was wide; his acquaintance with public men extensive. He had been broadened by his experience as a lawmaker in both the state and national legislatures. He knew the underlying principles of agriculture as laid down in books, and he also knew the problems and practices of profitable farming. He was a champion of the farm as a field of opportunity, and he furnished the illustration in his own career. His lifelong participation in large affairs gave him the grasp and poise for the management of a great institution like this.

JUST A BEGINNING.

"In thus setting apart an abiding place for the bronze features of Senator Harris where succeeding generations of students, by daily observation, may read the lesson of his life, the regents cherish the hope that thereby a custom has been inaugurated. They hope that the precedent made today will result, eventually, in dotting this campus with the mute presentations of many Kansans who, in their lives, combined eminence in the service of the state with exceptional achievement in the great industry upon which the prosperity of Kansas mainly rests, to the fostering of which this school is dedicated.

"They of the sword, the military and naval academies at West Point and Annapolis, have embellished their grounds with statues of their illustrious dead. And we of the plowshare and pruning hook, we who have enlisted in the cause of nourishing and enriching human life, may well profit by their example and in like manner pay tribute, as we now do, to the memory of our departed leaders."

BORN IN VIRGINIA.

William Alexander Harris was born in Loudoun county, Virginia, in 1841. He served in the confederate army and emerged from the war a colonel. In 1865 he removed to Kansas. He was a railroad man for a while, but in 1876 he began his career as a breeder of shorthorns. For two years—1893-'95—he represented Kansas in congress. From 1897 to 1903 he served as a United States senator from the same state. He was a regent of the agricultural college when he died.

The memorial was given by his friends. The desire to erect it was voiced soon after Senator Harris' death, December 20, 1909, by many friends in every part of Kansas, and in Kansas City, St. Louis, Chicago, and other live-stock centers.

THE MEMORIAL FUND.

A committee was selected by the contributors to take charge of the fund and choose a site for the memorial. The committee was made up of Alvin Sanders, of the American tariff board, owner of the *Breeders' Gazette*, Chicago; B. O. Cowan, secretary of the American Short Horn Breeders' Association; Col. J. F. True, of Topeka; Senator W. H. Avery, of Wakefield, Kan.; John Tomson, of Dover, Kan., and Henry Jackson Waters, president of the Kansas State Agricultural College.

ITS MEANING TO STUDENTS.

Captain Waters Spoke Eloquently of Senator Harris' Fine Example.

Captain J. G. Waters, of Topeka, life long friend of Senator Harris, said in part:

There can be but one chief purpose in commanding this example of the sculptor's art. It is intended to command the attention of men. It shall

be a constant suggestion of the sterling character it represents; it is intended that it shall lift the aspiration of others and imbue them with its example of right living, high purpose, and useful life.

Connected with and ancillary to this noble aim is the lesser one of honor to the man, who by his powers and his usefulness forced himself into uneroding bronze and compelled us to remember him. This is the meaning of this ceremonial to-day. If the great body of students of this superb seat of learning was not to profit by the scene, the occasion, the people here, the words spoken here, by this splendid creation of the sculptor, and is to take nothing from the life of the dead citizen it is now proposed to honor, it would have been better that the tool had never uncovered this magnificent form. A man's glory should answer only to the call and

DO A LITTLE PAINTING.

THE OLD HOUSE WOULD LOOK MORE CHEERFUL WITH A COAT OR TWO.

There's Money Saved, Too, for Buildings That Are Painted Will Last 25 to 50 Per Cent Longer, an Expert at the College Says.

Why not use a little paint occasionally, good people? Not long ago a painted farm building was a curiosity, but farmers are learning that paint is a good investment. It prolongs the life of the buildings, adds value to the price of the farm, and helps to make a "home beautiful."

Buildings last 25 to 50 per cent longer if painted, says C. F. Chase, assistant in farm mechanics at the Kansas State Agricultural College. That means that a building which would last 50 to 75 years unpainted would last 75 to 125 years if painted. It is the same with certain fences and farm implements. It is easy to see that paint saves money.

Unquestionably, paint raises the value of a farm. A place with well-kept buildings, painted regularly, will sell from one half to five or ten times more than it would if it wasn't well kept. The story of an Ohio farmer's experience with paint proves this. A farmer in that state wished to sell his homestead. He had allowed it to run down until the fences were very poor and the house and buildings were a disgrace to the neighborhood. Finally a wide-awake man came along and purchased this farm. He spent \$200 in painting the buildings and repairing the fences and tidying up in general. Within two months he sold the place for \$1600 more than he paid for it. He did nothing to the crop-producing power of the soil. He had only made the farm neat and attractive and much more "homely."

In making the "home beautiful," perhaps the largest and best paying investment is effected. Who cares to live in an old sunburned house that never felt the touch of a paint brush? Who would blame a boy or girl, either, for running away to town to get away from it? And yet only a coat or two of paint would work a great change. The old home would have a fresh, neat appearance.

A HALL IS DEDICATED.

The Webster and Eurodelphian Societies Have a Room in the New Gymnasium.

The Webster-Eurodelphian hall, which is the southwest room on the third floor of the new Gymnasium, was dedicated Saturday night. The new hall is to be used by both the Webster and the Eurodelphian literary societies for boys and girls respectively.

R. R. Rees, congressman from this district, an alumnus of the Webster society, class of 1885, presided at the dedication exercises. There were two sessions of the society.

The first meeting was held in the new hall from 7:30 until 8:45. Short talks were made by Prof. Albert Dickens and C. A. Scott, state forester, for the alumni Websters. Miss Helen Husé and Miss Reva Cree were the alumni Eurodelphian speakers. Walter Ward, president of the Webster society, in a short address formally thanked the alumni members for their continued interest in the society work.

President Waters delivered the dedicatory address. Afterward he presented a gavel and block to the presidents of the two societies. Miss Lulu Case accepted the gift for the societies. The gavel and block were made from oak that was a part of the first building at the old Blumont College.

The second session of the ceremonies was in the Auditorium with President Waters presiding. There

was an attendance of about 450. H. C. Rushmore, an alumnus of the Webster society, class of 1879, spoke. He was followed by Congressman Rees, who gave the principal address of the ceremonies. Music for the evening was furnished by the Webster sextet and the Eurodelphian quartet.

At the end of the exercises in the Auditorium a reception was held in the society hall. Punch was served.

The new hall is tastefully furnished. The chairs were given by alumni Websters. The carpet is velvet.

WON THE \$400 AWARD.

First Place and a Scholarship for Karl Musser, Judging Holsteins.

In judging Holstein dairy cattle, this afternoon, in the National Dairy Show, Chicago, Karl Musser, a senior student in this college, was awarded first place and a \$400 scholarship. Musser worked in competition with eight or ten of the leading agricultural colleges of this country and of Canada. A telegram from Dean Webster to President Waters conveyed the welcome news.

Mr. Musser's home is in Twin Falls, Idaho. For thirty-five years his family lived at Abilene, this state, but moved three years ago. Mr. Musser is manager of the Students' Co-operative Bookstore. He has paid his way through college.

The stock judging team from this college won first place, two weeks ago, in the American Royal Live Stock Show at Kansas City over all other colleges.

EDUCATORS WERE VISITORS.

The Superintendents of Instruction from 25 States Saw the College.

The superintendents of public instruction from twenty-five states were entertained at the Kansas State Agricultural College Thursday of last week. A national convention of the superintendents was in progress at Topeka and the party came from there at noon. They were met at the train by the Manhattan Motor Club and taken to Domestic Science Hall, where a luncheon was prepared and served by girls in the domestic science school.

"Fine meal," they said as they left the domestic science building and hurried over to the Auditorium, where a special student assembly was held. Dr. P. P. Claxton, U. S. Commissioner of Education, was the principal speaker.

The educators were next given a chance to see the college and spent some time in the buildings. The prize stock of the college was brought out and paraded. The superintendents returned to Topeka on an afternoon train.

The convention at Topeka is discussing the improvement of rural schools, for one thing. As the Kansas State Agricultural College is in the front rank in this movement, the superintendents came here to see what the college is doing.

Death of a Former Regent.

News of the death of W. D. Street, of Oberlin, Kan., at one time a regent of the Kansas State Agricultural College, was received in Manhattan last week. Mr. Street was president of the board of regents in the populist days of the nineties.

Many Colored Maps.

The engraving division of the United States Geological Survey printed during the fiscal year, ending June 30, 1911, 7,283,894 geologic, topographic, and other maps, many of them in several colors, each requiring a separate impression. Some of the geologic maps require as many as 20 printings. The total number of printings during the year's work was probably not less than 45,000,000 or 50,000,000.



Harris Memorial Dedicated Today.

The memorial is a bronze bust of heroic size on a pedestal of granite. It cost \$2500. A bronze plate on the granite bears the inscription:

WILLIAM ALEXANDER HARRIS
1841-1909
SOLDIER AND STATESMAN
A MODERN FARMER AND BREEDER
A RESOLUTE LEGISLATOR WITHOUT REPROACH
A NOTABLE EXAMPLE OF AMERICAN MANHOOD

power of his example. For such good ends the bust of Senator Harris is here given the sunlight to-day.

He was a clean man in thought and action. At every angle of human conduct he was always a gentleman. He kept himself abreast of the great world's acting and doing. Mild and suave in expression, the velvet hid the iron of his determination. He bent no knee nor suffered it in others. The commoner received his respect and attention, and more a potentate could not obtain. His presence was companionable and his conversation profitable. I would call him, not another Bayard, but rather the more to my wishes and liking, an ideal representative American. His was an old time chivalry. He honored honor. In his kindly heart he held women in the highest esteem. He respected men because he first respected himself. He was the soul of honor. Had he pandered for wealth, he could have died rich, for lucre jingled its purse within reach of his hand. It has been the regret of Kansas people that a vile, coarse and brutal partisan demand or protest held back the great honor the

(Continued on page two.)

THE KANSAS INDUSTRIALIST

Established 1875.

Issued weekly during the college year by the Kansas State Agricultural College, Manhattan, Kansas.

PRES. H. J. WATERS Editor-in-chief
PROF. C. J. DILLON Managing Editor
DR. J. D. WALTERS Local Editor

Except for contributions from officers of the college or members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism, under the direction of Prof. Charles Dillon.

The typesetting and other mechanical work is by students in the school of printing, of which J. D. Rickman is superintendent. Both these departments are in Kedzie Hall.

Newspapers and other publications are invited to use the contents of the paper freely without credit.

The increasing demand for THE KANSAS INDUSTRIALIST makes it necessary to insist upon the payment of the regular subscription price, 50 cents a year, invariably in advance. No commission is paid any one for subscriptions, and no advertisements are accepted. The paper is sent free only to the alumni, to officers of the state, and members of the legislature. This rule will not be violated.

Entered at the post-office, Manhattan, Kan., as second-class matter October 27, 1910. Act of July 16, 1894.

SATURDAY, OCTOBER 28, 1911.

WILLIAM A. HARRIS.

No more fitting site could have been chosen for the people's memorial to the man whom they honored, this afternoon, than the spot in front of Fairchild Hall. First, it is upon the campus of the agricultural college, to the greatness of which he added his own strong personality while a regent, and secondly, it stands before the technical library to which he was a liberal contributor from his own resources. No boy or girl, in the future, can pass between Anderson Hall, the seat of college administration, and the library without viewing the testimonial bestowed upon a gallant soldier, a statesman of merit, a farmer and breeder of national repute. Through the passing years the memorial will be an imperishable token, in granite and bronze, to prove that the world of busy men does put a high value upon righteousness in public life, does take note of its fine, strong characters, does give encouragement to those who do their best. The world is not ungrateful. It admires manly men, and Senator Harris was a notable type in that category.

Perhaps the finest proof of the esteem in which Senator Harris was held came when President Waters asked a large number of men to contribute an epitaph, or inscription, for the bronze tablet to be put on the granite pedestal. These men represented several branches of business and professional life. They had known the senator in all the departments of his busy career, politically, socially, and commercially. But when they faced, deliberately, the task of telling the good things he had done for humanity, how much he had improved the world by living in it, they were lost in a rush of adjectives, and dismayed by the hopelessness of their assignment. Men accustomed to writing confessed themselves unable to say whether Senator Harris, in history, should be noted most for his military services, his accomplishments as a statesman, or his undoubtedly success as a breeder of fine shorthorn cattle.

The dry farming congress took one big stride in progress: It put itself on record—led by scientific men, too—in favor of publicity and publicity departments, modeled, as the Colorado Springs *Herald-Telegraph* said in printing the resolution, after the department of industrial journalism in the Kansas State Agricultural College. With becoming modesty this compliment is filed away with a few other good things that are vouchsafed to the willing workers in fields of newspaper work. The congress was right in urging appropriations for such departments because, properly conducted, they take important information to the farmers and the farmers' families, and, moreover, they take it in plain, homely guise that all who read may understand.

Doctor Squires a Visitor.

Dr. J. H. Squires, of the Dupont De Nemours Powder Company, Wilmington, Del., was here last week looking over results of experiments begun last year in co-operation with the departments of horticulture and agronomy. He arranged to continue these experiments and begin some new ones to test dynamite in soil preparation. Doctor Squires formerly was agronomist for New Mexico.

A. K. U. Editor Here.

E. LaCrosse, editor of the K. U. *Kansan*, was entertained at the Masonic Club Sunday.

reaches few of the millions whom it is hoped to benefit. Farmers will not attend such gatherings. They never have attended them. Of course there always will be a few in the crowd—there were not 200 tillers of the soil in the Colorado Springs congress—but the actual farmers, the men who need the fine help this congress might give them, will not, or cannot, attend. Here was a body representing about all the enlightened nations of the world and many of the states and provinces of the North American continent, for the most part, educators, scientific men, departmental attaches. But the farmer, the man about whom the world is worrying, was at home stubbornly trying to figure it out for himself or struggling along in the old ways of his father. Colorado and Utah had a few farmers in the congress. Kansas sent a few—not many. Missouri, as deeply concerned as this state, was not represented. And Kansas would not have been represented had it not been for the agricultural college and private enterprises in a few western counties. Oklahoma had as fine an exhibit as any state might wish, and declared it all in the dry-farming section. Kansas, where anything can be grown that the Almighty has included in the schedule for this country, had a small, well-arranged, but decidedly skimpy little display of its products. This display was sent by the counties of Finney, Gray, Ellis, Ford, Morton, Thomas, Seward, Gove, Smith, Norton and Kearney, and it demonstrated what fine things can be grown in those sections. It showed commendable enterprise and spirit on the part of the citizens of those counties. But it wasn't big enough to show what a great state Kansas really is and what exceptionally excellent things it can grow.

For the scientific man, for the wealthy farmers—of whom there are some, glory be—for the college officers and staffs, and for the industrial agents of railroads, the dry-farming congress is a good thing. It gives them a valuable chance to get together and discuss matters that will help the real farmers, some day. But in the final analysis the congress has proved, to thinking persons, that the way to reach the farmer and the farmer's heart is through the agricultural colleges. True, this is not so easily done in some far western states where these colleges are cramped for funds and so are unable to take the colleges to the farmer, but in states like Kansas and Missouri the most direct benefit for the farmers, the quickest way to tell him a thing, is through the college and the institute meetings watched over and arranged by the college.

The dry farming congress took one big stride in progress: It put itself on record—led by scientific men, too—in favor of publicity and publicity departments, modeled, as the Colorado Springs *Herald-Telegraph* said in printing the resolution, after the department of industrial journalism in the Kansas State Agricultural College. With becoming modesty this compliment is filed away with a few other good things that are vouchsafed to the willing workers in fields of newspaper work. The congress was right in urging appropriations for such departments because, properly conducted, they take important information to the farmers and the farmers' families, and, moreover, they take it in plain, homely guise that all who read may understand.

These things are not important. They need not be segregated. The world will think only of a well-lived life, of a clean character, of the man's worth as an example to be emulated. It will be remembered that what Senator Harris did he did so well that it was entitled to be recorded apart. And more than all else, perhaps, will be treasured, by thousands who may never see the memorial, the delightful memory of a big man who was always courteous, and especially to those whose business it was to meet him in unseasonable hours and in trying circumstances. Few men ever surpassed him in this respect. It is a quality sufficiently rare to merit mention upon tablets. In the very highest sense Senator Harris was an American gentleman. Nothing better could be said of any man.

THE DRY FARMING CONGRESS.

The latest session of the International Dry Farming Congress at Colorado Springs proved, rather clearly, that this kind of meeting

A GOLDEN TEXT.

Be thou my strong habitation, whereunto I may continually resort: thou hast given commandment to save me; for thou art my rock and my fortress.—*Psalms 71:3.*

HONOR TO HARRIS' NAME.

(Continued from first page.)

President of the United States persistently desired to confer upon him.

In these later days, when serious tribunals are investigating the conduct of men who hold high official trusts, it is pleasant to know that the smell of smoke was never on his garments. His palms were never extended upward. His dollars were not burdened by excuse.

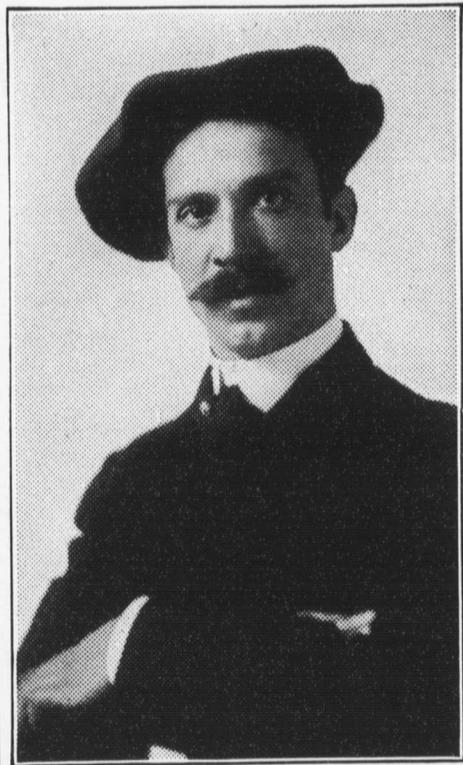
This college, of which he was a valued regent, knows to the fullest his practical worth, and many of the students will long remember him for the useful information he imparted. Nor this institution alone. The city of Manhattan lay in the path to the Pacific of the great military route that should end the isolation of that far coast and bring California and Oregon within reach of the nation's protecting arms. He gave his time and talent in securing that road and in building it, and the straggling village became a beautiful city.

I now say to this good man goodbye and leave him to the ages. At another time, in another place, answering in my own person my own summons, but few unseen leagues away, I hope to hail him "good morning!"

THE MAN WHO MADE IT.

Florence, the Home of Art, Was Carlo Romanelli's Birthplace.

The bronze bust of Senator Harris was made by Carlo Romanelli, son of a noted Italian sculptor now living in



Carlo Romanelli, sculptor.

Florence. From his fourteenth to his twentieth birthday anniversary Romanelli studied in the Florence Academy of Art founded in the sixteenth century by Michael Angelo. His instructor was Rivalti, creator of the immense monument of Garibaldi now on Mount Gianicolo, Rome.

Romanelli finally established a home and a studio in Detroit, Mich., where he has created several remarkable works, among them the monument of R. A. Alger, late secretary of war.

After eight years in Detroit the sculptor moved to Chicago. There he became acquainted with business men and eventually with Senator Harris—about a year before his death. So keen was Romanelli's perception that the committee, it was said, found it unnecessary to give him one suggestion in his work or to change his model. Realizing the impossibility of obtaining accurate reproductions in bronze by the American method of sand casting, Romanelli interested some prominent Chicagoans in establishing the Florentine Brotherhood Foundry, established near the entrance to the Union Stock Yards.

THE SHORTHORNS HE BRED.

Secretary Cowan Tells How Senator Harris Established Linwood Farm.

The tribute to Senator Harris' memory, paid by B. O. Cowan, secretary of the American Short Horn Breeders' Association, follows in part:

After Mr. Harris had assisted, as a civil engineer, in surveying and locating the branch of the Union Pacific railroad that runs through Manhattan he found the beautiful tract of land near Linwood, Kan., that he afterward purchased and on which he built a beautiful home and established that excellent herd of shorthorns with which stockmen always associate his name.

As an intelligent and progressive agriculturist, he had watched with keen interest the progress of shorthorn cattle under the dominance of Bates blood and the leadership of Bates influence, under which were the "boom" prices of the 70's. But with the introduction of Scotch shorthorns into the United States, Mr. Harris decided that these sturdy, thick-fleshed representatives of the breed were better suited to the wants of the farmer, so he made extensive purchases of this line of breeding as the foundation of his herd. But while he preferred Scotch cattle and made them the foundation of his wide and excellent reputation as a breeder of high-class cattle, he recognized merit in other blood lines and did not hesitate to buy at liberal prices any good shorthorn that answered his purpose. He was as quick to condemn the aristocracy of pedigree alone among cattle as the aristocracy of pedigree alone among men.

At an early period in his experience as a shorthorn breeder, Mr. Harris was fortunate in obtaining a bull of outstanding merit as a sire, without which no cattle man can attain a high rank as a breeder. At a public sale held by J. H. Kissinger, of Missouri, he purchased the Cruickshank bred bull Imp. Baron Victor, and it was his excellence as a sire that drew the attention of shorthorn breeders of America to Linwood Farm and created a demand for herd bulls which has been equaled in the experience of few breeders in the United States. As a result of this, his influence in moulding the form and character of shorthorns, especially of the western states, was very great. The many excellent bulls and cows in that herd have left an impress on the breed that will be carried through many generations. Baron Victor, Baron Lavender 2d, Imp. Golden Thistle, and Imp. Princess Alice are not only written indelibly in shorthorn history, but are household words among shorthorn breeders.

Mr. Harris assisted in the organization of the American Short Horn Breeders' Association in 1883, and served on its board of directors for sixteen years. During the last few years of his life he was employed by the association to promote the interest of shorthorns by his pen and voice. In the discharge of these duties, he made frequent addresses to various assemblies, but from his own lips I have the statement that it was to an audience of agricultural college students that he spoke with greatest pleasure to himself.

Great as were Mr. Harris' services to his state and nation, both in the House of Representatives and the Senate, his greatest help to his fellow-men has been in the field of improved agriculture and live-stock breeding.

Mr. Harris was a very careful student of nature and a lover of the beauties of agricultural life. To become imbued with his enthusiasm one had only to stroll with him over the beautiful meadows as they existed at Linwood, and see his superb cattle cropping the rich, succulent grasses, and growing more beautiful with the passing months. It was with the most genuine regret that the shorthorn breeders of America witnessed the dispersion of this herd in 1896. But the maintenance of the herd seemed to Mr. Harris incompatible with exacting personal attention to the duties of an exalted public service to which the people of Kansas had called him.

(Concluded on page three.)

When the Cows Are Coming Home.

Come, my love, and let us wander 'Cross the hills and over yonder; We shall find the tangled trails we used to roam; Where the distant sea was moaning And the honey bees were droneing In the twilight when the cows were coming home.

Hear the tinkle, tinkle, tangle of the bells, As they ring on the downs and in the dells; O'er the meadow in the gloam See the cows are coming home; Hear the ding, dong, dingle, dangle of the bells. O, the sweet forget-me-not, I should like to live forever, Never more than two months either way from Jane; Where the cherry blossoms were falling And the silver hills were calling Through the twilight of a summer's noon.—From "Songs of Cy Warman."

SUNFLOWERS.

In the football game, last Saturday, several of the Aggies ran to beat Heil, but failed utterly.

Strange fact: The lower you go, in a Pullman, the higher the birth rate. Yes, we know how to spell it. That's the joke.

How angry the farmers must be, now that they know it is the *Eleodes opaca* that is eating the seed wheat. And what, pray, should we feed the *opaca*, besides wheat?

Many persons, including W. J. Bryan, have forgotten, says the Hutchinson News, that Oscar Underwood, of Alabama, is a candidate for the Presidency. Let's all forget it.

Don't overlook this fact, either: When a man marries he changes his sour-stomach viewpoint about women, or keeps it to himself. A good woman can cure almost any cynic.

Will The Topeka Journal please explain, while it's at it, why it ran that funeral cartoon, last Thursday, showing the Athletics in mourning. This comes mighty near being libel.

The most remarkable thing, after all, about Bunker Walsh's release from the penitentiary was the fact that not a paper in the country said: "The great iron gates opened outward—"

After careful inquiry, Harold, we learn that the nitrates, so often referred to in the recent Dry Farmers' Congress, had no reference to the tolls on messages. It was an entirely different subject.

A wedding was postponed, a few days ago, in Quincy, Mass., because the man had obtained only a hunting license. In certain circumstances, not necessary to enumerate here, he had the proper document.

There are several things and several persons about which and about whom we are tired hearing, and first on the list is the Sharp family. We believe Mr. Dawson could handle the situation if those two women were not at large.

What strange common sense was displayed by the court in the McNamara case, in Los Angeles. It actually permits men to serve as jurors who believe dynamite was used in blowing up the Times building! You could never put that over in Kansas City.

Anxious.—You say an accident has left you with only two thumbs, and ask us to suggest some profession by which you may earn a living. So many persons have only two thumbs that we are quite unable to advise you. How many did you have before the unfortunate occurrence?

The man who was murdered, a few days ago, in a western Kansas town, "while in bed with an ax," to quote the report of the tragedy, may have been related to the unhappy victim in Kansas City, described in The Star a few years ago, who was "stabbed under the stairs."

As for Professor Dyche and his famous menu of Kansas products, we have only this to say: Looking at our useless investment in guns and fishing tackle we should like to make up, just once, the menu for this person. And we say it in all sincerity, too.

The state universities at Lawrence and Columbia have faithfully reported their enrollments of boys and girls from Kansas City, Mo. Chillicothe, which has the state home for incorrigible girls, or industrial home for girls—whichever it is—followed this with a report that it, too, had more girls from Kansas City than any other place. Now let us hear from Jefferson City and Leavenworth.

LOCAL NOTES.

A girl was born to Prof. and Mrs. E. P. Johnston, October 23.

Clay Lint, a senior, has just taken out an assignment. He has been helping to make a government soil survey in Kansas since last July.

Captain and Mrs. P. M. Shaffer visited in Manhattan a few days last week. They were on the way from Saratoga Springs, N. Y., to their new home at Fort Lawton, Wash., where Captain Shaffer's regiment, the 25th Infantry, is stationed.

Dr. John Scott, for the past three summers an instructor in the Marine Biological Laboratory, Woods Hole, Mass., is now an instructor in zoölogy at this college. Doctor Scott is a graduate of the University of Missouri and an alumnus of the graduate school of Chicago University.

Members of the Alpha Beta Literary Society furnished part of the program in student assembly last Friday morning. It was the first of a series of programs which will be given by the various literary societies. Miss Thomas sang two pleasing solos and Roy Gwinn gave a short address in which he told of the value of literary society training.

ALUMNI NOTES.

Edna Willis, '10, was about college Wednesday.

S. M. Ransopher, '11, visited in Manhattan, Sunday.

Stanley Willis, of Horton, was a guest of his sister Saturday.

Miss Hester Glover, '11, witnessed the K. U.-Aggie game, Saturday.

W. L. Blizzard, '10, is working for the animal husbandry department.

Harlan Deaver, '10, was a college visitor and a football rooter last Saturday.

W. B. Honska, '11, visited the college last week. He is farming near Lost Springs, Kan.

Silas Milo Ransopher, '11, and Miss Leah Hays were married in Clyde, Kan., October 25.

L. B. Bender, '04, a second lieutenant in the U. S. army, is stationed at Fort Andrews, Mass.

Mrs. Ernest Adams, '08, is visiting her parents, Mr. and Mrs. H. B. Rannels, of Manhattan.

L. B. Mickel, '10, has been made manager of the Springfield, Ill., branch of the United Press.

S. E. Houk, '11, is a United States inspector in the Cudahy packing company's plant in Kansas City.

A. J. Rhodes, '05, F. E. Brown, '06, and F. B. McKinnell, '08, were alumni rooters at the K. U. game.

Miss Reva Cree and Miss Ethel Coffman, both of the class of 1910, were visitors at the college last week.

Miss Ellen Nelson, '11, left the college last week to teach domestic science in Tillotson College, Austin, Texas.

C. W. Cummings, '05, is superintendent of an irrigation company near Pueblo, Colo. His address is Nepesta.

Mr. and Mrs. H. A. Praeger, members of the '08 class, are parents of a boy, Walter Grizzell, born October 10.

Carl Mallon, '07, who made the touchdown that beat K. U. in 1906, was a spectator at last Saturday's game.

A. A. Gist, '91, was in Manhattan last week. He is a trainmaster on the Santa Fé with headquarters at Arkansas City.

P. E. McNall, '09, visited the college Saturday and attended the K. U. Aggie game. He is teaching school at Minneapolis, Kan.

P. H. Ross, '02, is teaching agriculture in the high school at Jewell City. Mr. Ross was in government work in Alaska for several years.

A. W. Seng, John Schlaefli, J. E. McDowell, George May, and D. G. Roth, all of the '11 class, attended the football game, Saturday.

G. A. Savage, '09, and Miss Beulah Wilkins, both of Miltonvale, Kan.,

were married in Manhattan October 18. They will live in Miltonvale.

William DeOzro Davis, '04, who is with the electrical department of the Santa Fé with headquarters at Topeka, Kan., visited the college Monday.

Fred Walters, '02, son of Dr. J. D. Walters, professor of architecture and drawing, is an instructor in mathematics in a school for girls at Chickasha, Okla.

Charles Gilkison, '06, of Larned, was in Manhattan, October 15, on the way from Kansas City to the Pacific coast, where he will visit for several months.

Roland Lloyd, '10, was renewing acquaintances in Manhattan last week. He is with the Westinghouse Electric Company, with headquarters at Pittsburgh, Pa.

Mr. and Mrs. J. L. Smith, members of the 1908 class, are visiting in Manhattan this week. They stopped off on the way from Boulder, Colo., to their home in Topeka.

Miss Blanche Ingersoll, '11, instructor in domestic science in the Minneapolis, Kan., high school, saw the football game and visited friends at the college Saturday.

Miss Dorothy Hardesty, of Delphos, and Guy D. Noel, '09, of Garden City, were married at the home of Miss Hardesty October 18. Mr. and Mrs. Noel will live at Garden City.

Miss Loubertha Smith, '10, of Chivington, Colo., is visiting Miss Ruth Kellogg, '10, at her home in Manhattan. Miss Smith will be a teacher in the new Bluemont school in this city as soon as it is ready.

Donald Jones, '11, has been elected assistant plant breeder in the University of Arizona. He has charge of irrigation plots in the desert, besides several smaller plots and three greenhouses at the university.

Miss Nell Hickok, Miss Claire Lewallen, Miss Bertha Plumb, Merl Sims, J. H. Coffman, Newell Robb, Carl Irwin, O. E. Williams, and Van Buck, all members of the 1911 class, were at the football game Saturday.

H. M. Thomas, '98, manager of the collection department of the J. I. Case Manufacturing Company, Racine, Wis., visited the college last week. Mr. Thomas was captain of a company of students from this college who enlisted in the Spanish war.

George Croyle, '11, better known as "Dad," left Monday for Willmair, Minn. He will teach manual training and be coach of athletics in the high school at that place. "Dad" has been helping Coach Lowman whip the Aggies into shape. Willmair High School should have a winning football team now.

W. O. Pennell, chief engineer of the Missouri and Kansas Telephone Company, will address the college branch of the American Institute of Electrical Engineers at the regular meeting, Tuesday, November 7. The lecture will be given at 8 p. m. in C60 to all who are interested. Mr. Pennell is one of several engineers who will address students in electrical engineering this year.

MUST BE A BUSINESS MAN.

Professor Leidigh Says a Successful Farmer is a Good Manager.

To be a successful farmer a graduate of an agricultural college must have business ability and power of deciding things. That is, he must make farming a business and receive something more from it than wages for manual labor.

A. H. Leidigh, assistant professor of crops, told the agricultural students this in a talk given at the last meeting of the Agricultural Association. After deciding to arrange a judging contest between students in the four agricultural departments of the college, the meeting was adjourned to the second Monday in November.

Add a Little Salt.

After washing black stockings, add to the rinsing water a little salt to preserve the color. New stockings should always be washed before being worn.—*Louisville Herald*.

HONOR TO HARRIS' NAME.

(Concluded from page two.)

ALVIN SANDERS' TRIBUTE.

For Many Years He and Senator Harris Were Close Friends.

In a letter to President Waters, Alvin Sanders, vice-chairman of the United States Tariff Board, owner of the *Breeders' Gazette*, of Chicago, expressed his regret at being unable to attend the ceremonies to-day. He said:

"My acquaintance with Senator Harris began when, as a young man, I met him in the blue grass pastures of old Kentucky in the spring of 1882. Your invitation to me to deliver an address upon this occasion awakens in my heart and mind feelings which I find it difficult to repress. It was more than an ordinary friendship that existed between us. It reached the heights of genuine affection. There is but one word in the language that fully expresses what I felt towards him. I loved him. I cannot here attempt to tell you why. It is too long a story—a story that would begin with the early days at Linwood Farm, leading up through long years of joint endeavor in behalf of what we both thought, as students, to be for the best interest of our western agriculture; the story of a faith that led us together across the Atlantic; that bound us by all the ties of an enduring affection throughout all his long and honorable public career and found its richest fruitage, at least so far as we ourselves were concerned, during some of the darker hours that marked the beginning of the end of his eventful life.

"In a volume written some years ago, I recorded something of his services to his country in the realm of agriculture. In writing of him, at the time of his decease, I said, perhaps, all that one friend may say of another. To all this it is futile for me to try to add at this time. He was a man who subordinated self and all things else, at all times, to the call of what he conceived to be his duty. He was a soldier first of all. He would, therefore, be the very first to insist that I stand closely to the exposed position in which I find myself to-day, rather than leave it even for such a laudable purpose as participation in post-mortem ceremonies. I have the great satisfaction of knowing that I laid flowers at his feet while he was living, but I am glad to add to-day my own heartfelt tribute to yours to Senator Harris—dead. A just man; an honest man; an able man; a sincere man; a noble man. This bronze should prove an inspiration to all who, in the years to come, may pause to read the inscription borne upon its tablet."

THE BOOKS HE GAVE.

An Important Collection of 114 Volumes Contributed by Senator Harris.

The late Senator Harris gave 114 volumes to the library of the Kansas State Agricultural College. The books are on exhibition in the reading room.

Some of the volumes are on general agricultural subjects, others relate to specific phases of that large subject. A large part of the collection is devoted to works on animal breeding. Senator Harris was a breeder of shorthorn cattle. Others of the collection are about home improvement, irrigation and reclamation of swamp lands, and engineering problems. Several reports of the department of agriculture are valuable. There are also presidential papers and reports of the proceedings of congress.

DAIRY SHOW PRIZES \$15,000.

A \$400 Agricultural Scholarship is Offered in the Judging Contest.

The official premium list of the Sixth National Dairy Show is exceptionally liberal and comprehensive. Over \$15,000 in money, trophies, medals, cups, scholarships, diplomas, and ribbons are hung up for the show, which opened last Thursday in Chicago. Of course interest centers in the Waddington \$1000 trophy, with \$250 second and \$100 third, for the best five dairy cows of any breed, bred by, but not necessarily owned by, exhibitor. The

Waddington trophy is presented by E. G. Oglebay, of Elm Grove, W. Va.

For Ayrshires and Brown Swiss a silver cup is put up by their respective associations. Guernsey breeders have up \$350 besides the regular prizes and four trophies for students' judging. The Holstein Association comes up with \$1520 besides a year's free scholarship for postgraduate study in an agricultural college.

The Jersey people have added twenty-five per cent to all regular premiums, and they have also exactly duplicated the show association's premiums for official record cows. The breeders of Jerseys exhibited are offered \$200 in cash and two gold medals. A \$400 agricultural scholarship is offered in students' judging contest. For Jersey special prizes on "get of sire," herd and champions, a total of \$800 available, either in money prizes or silver trophies of equal value. Prentice specials for Premier exhibitor and Premier breeder total \$250 in cash.

To put an extra finish on the premium list, President Taft has given a cup in the students' judging contest.

"SHALL THE PEOPLE RULE?"

A Familiar Sound in the Quiry of the Rev. S. Alonso Bright.

"Get ready for the rule of the common people, for the whole country has gone democratic," said the Rev. S. Alonso Bright, formerly of Manhattan but now of Albuquerque, N. M., in student assembly Saturday morning. "This is not to be taken in a political sense," continued Mr. Bright, "politics is only the grease on the axle of progress. And the world's progress proves the democratic spirit of the nations. The man who throws himself in the way of this progress accomplishes only his own destruction."

Mr. Bright further counseled the students that only by being master of his job could a man expect success.

TO REPRESENT K. S. A. C.

Dr. Edward O. Sisson, '86, Will be at the U. of W. Celebration.

The Kansas State Agricultural College has been asked to send a representative to the celebration of the semi-centennial of the University of Washington, Seattle, November 3 to 7. President Waters has designated Dr. Edward O. Sisson, of the class of '86 of this institution, now professor of pedagogy and director of the school of education of the University of Washington, as its representative on that occasion.

Persimmons Pleased Him.

G. P. Rixford, of the bureau of plant industry, U. S. Department of Agriculture, expert assistant of Dr. W. T. Swingle, visited the college Wednesday morning, last week, to observe the persimmon breeding experiments carried on by the horticultural department. He expressed himself greatly pleased with the work, saying that the collection of seedling persimmons here was the best he had seen. He visited the orchards to inspect the results secured in the spraying experiments for the control of apple blotch. He was particularly struck with the appearance of the Missouri Pippins, which variety shows especially gratifying results of this year's experiments.

China Preserves its Eggs.

The exportation of eggs from Tsingtau, in China, in 1910, was 1,821,183 dozens, of which the bulk went to Vladivostok. The *Newark News* (July 15), which furnishes this information, tells us that one Chinese factory is engaged in the export of prepared dried eggs, and that the manufacture of egg cognac, egg noodles, and albumen also uses about 3300 dozens a day.—*Literary Digest*.

Left-Over Cereal.

If the left-over breakfast cereal is carefully moulded into a bowl or square pan that is first wet with cold water it may be sliced and fried as an acceptable luncheon dish.—*Columbus Citizen*.

ECONOMY IN THE SCRAPS.

BUT OF COURSE LEFT-OVERS MUST BE MADE INTO ATTRACTIVE DISHES.

The Farmer's Wife is Extravagant, Too, in Using Eggs, Milk and Butter—Five "Whites" in a Cake Will do as Well as Eight.

The farmer's wife, generally, is wasteful. Perhaps not in the big things of the household. She may wear the same hat three successive seasons, and conscientiously use the speckled apples before beginning on the good ones, but too often she has not learned the importance of watching the little things. Economy is one of the points emphasized in the domestic science school at the Kansas State Agricultural College. The girls are reminded to stop the little wastes.

Milk, butter and eggs are so plentiful on the farm the housewife is likely to think it unnecessary to be economical in their use. She thinks nothing of putting eight egg whites into a cake when equally good results could be obtained by using five or six. And if she doesn't have immediate need of the yolks for salad dressing, she consigns them to the garbage pail. If these yolks were saved they would be useful in preparing palatable dishes from left-overs. Or they might be used in egging and crumbing croquettes for supper, or in thickening to-morrow's bread pudding.

Left-overs are a point in domestic economy that many farmers' wives fail to see. To them it seems niggardly to cook enough food for one meal and no more, and they have little skill in using the surplus. When the warmed-over remnants of dinner do not appeal to the appetite at supper, and are left untouched, the housekeeper soon forms the habit of throwing away all the food left from each meal, easing her conscience with the thought that "It's good for the chickens." A little careful planning would transform those same despised remnants into palatable salads, soups, or made dishes. And there would be a saving.

It is nothing unusual to see two kinds of jelly, canned peaches and apple butter on the table in the farm home at the same meal. This means four jars of fruit open at once, and before they are used up the family is tired of every kind and the contents of all the jars have become moldy.

Little things, you will say. Certainly. But in the matter of saving and wasting, it is the little things that count, you know.

KANSAS TEACHERS TO MEET.

Many Instructors in this College Will Attend the Sessions in Topeka.

The Kansas State Teachers' Association is to meet in Topeka, November 9-10. Every teacher is invited. Of course that includes teachers of country schools as well as college professors.

"What next in Kansas educational work" is to be the central thought of the meeting. That question will be discussed in the general sessions. Special meetings for certain departments of educational work also are on the program. There is the primary and kindergarten department, the city superintendents' round table, the Latin department, the household arts section, the manual training round table, and a half dozen others. Every teacher can hear his special line of work discussed, and he can help discuss it in one of these side meetings.

The English section is to be in charge of J. W. Seaton, professor of the English language in the agricultural college. Professor Seaton also is chairman of the publicity bureau for the association.

A large number of instructors in the agricultural college are planning to attend the meeting.

Shoe Ribbons.

Some people have blue de roi, green, or violet ribbon tying their patent leather walking shoes, recalling the belt, or the embroidery, or some sort of trimming on the costume.—*Montreal Star*.

PROFIT IN GEESE, TOO.

THE EGGS, ALONE, BRING 30 CENTS TO \$1 APIECE FOR HATCHING.

Then There's the Meat and Feathers to Sell on Ready Markets—There Isn't Much Waste to These Foraging Fowls.

Raising geese can be made very profitable for a small, independent enterprise. They respond well to fair treatment and yield better returns than any other kind of fowls, says T. E. Schreiner, superintendent of the poultry plant at the Kansas State Agricultural College.

Four or five trios—a male and two females—to the quarter section, should be kept over during the winter. This, of course, depends upon the breeds, for the males of some breeds will not mate with more than one female. Geese do not require elaborate watering places, but plenty of good, pure drinking water is necessary. A few waste acres may be devoted profitably to their needs.

AS TO THE FEEDING.

The cost of feed for geese is small, compared with that for other market fowls. Geese live on forage and insects, and other vegetable and animal matter, from early spring until late fall. Goslings require four or five weeks' feeding and attention before they can be turned out to forage for themselves. Feeding is necessary again just before turning the young stuff into the Christmas or New Year's market. The stock fowls must be fed through the winter until there is forage for them.

There isn't much waste to a goose. It yields its feathers as the sheep does its wool. And then there are the eggs and meat—both valuable. Eggs, which are too expensive for food, have a high market value of from 30 cents to \$1 apiece for hatching purposes. The meat is worth 8 to 10 cents a pound, live weight, and there is always a ready market for it.

THE MARKET AGE.

The market age of goslings is twelve weeks, which is a short time after they have feathered out. About this time they will weigh from six to ten pounds. It is not unusual for goslings to gain from one half pound to a pound in a week.

Geese are best hatched by the natural method. The young are raised easily when allowed to run with the flock. The Toulouse and Embden breeds are the most common. The Embden breed is more fond of water. Toulouse geese will do well on dry land. The adults of this breed generally weigh from eighteen to twenty-five pounds. Geese will not do well if confined closely. A corral or a low shed with open sides should be provided for shutting them in at night.

Wolves and turtles are enemies of geese. Turtles attack the goslings and wolves eat the adults. Wolves bother only when the geese are allowed to remain out in the pastures overnight. Goslings use little discrimination in choosing a place to swim. The remote mudhole abounding in turtles will likely attract them.

AGGIES OUTPLAYED K. U.

But the University Was Luckier and Won a Football Battle, 6 to 0.

Backed by the whole school and fighting hard all the way, the Aggies lost to K. U., last Saturday, 6 to 0. At no time of the game did the spirit of the team or the student body lag. It was a game that will live in football history here as a credit to both teams. Heil, the speedy little Jayhawker quarter back, was the man that made the only touchdown of the game. He received a punt on his own 30-yard line and went 80 yards through a broken field for a touchdown.

That K. U. was outplayed cannot be disputed. Coach Sherwin, of K. U., admitted it. The Sherwin squad was on the defensive throughout the entire 60 minutes of play, and only Delaney's kicking kept the Aggies away from the Kansas goal.

In the first period of the game the Aggies pushed their opponents hard

and had chances to score. When the whistle blew for the end of the quarter the followers of Lowman's squad were clamoring for a touchdown. But trouble came in the second period. Heil was playing safety for K. U. The Aggies punted to Heil on the Jayhawker 30-yard line. Heil ran 80 yards for a touchdown. He was injured and removed from the game. K. U. kicked out to the 20-yard line and Ahrens kicked the goal.

Captain Holmes was the sensation of the game. He made long gains through the Kansas line and received forward passes for substantial advances. Burkholder and Loomis performed creditably in the line. Stahl played a great end. Sidorfsky's star shone brilliantly at left half. His running mate, "Ike" Hehn, played a great game. Young ran the team well.

Heil made a sensational run when he went through the Aggies for the touchdown. But Delaney deserves the credit for the clean slate of the Jayhawkers. Time after time the Aggie backs riddled the K. U. line and circled the ends for good gains, only to lose possession of the ball on a fumble or an incompletely forward pass with the Kansas goal in sight. Just as often Delaney punted out of danger.

The spirit of the rooters was great. A loyal bunch of rooters from the university, accompanied by their band, cheered their team when the Aggie backs were riddling the Kansas line. The cheering of the Aggie supporters was enough to make any team fight hard. The two bands contributed to the support of the teams.

To-day, October 28, the Aggies play Fairmount. It will be a hard contest. The rooters should keep up the "pep" that showed itself the night before the K. U. game and in chapel exercises all last week. It means a game already half won to have the school, not just the students, but the faculty, too, back of the team and lending hearty support.

The line-up:

K. U.	AGGIES
Ahrens.....c.....	Helps, Van Nordstrand
MacMillan.....l.g.....	Maughlin, Wehrle
Ammons (Capt.).....l.e.....	Holmes (Capt.)
Delaney.....l.e.....	Stahl
Davidson, Houk.....r.g.....	Burkholder
Baird, Schwab.....r.t.....	Loomis
Heil, Wilson.....q.b.....	Schaefer
Heil, Wilson.....q.b.....	Young, Sims
Coolidge, B. Woodbury.....r.h.....	Hehn, Schuster
T. Woodbury, Huffman.....l.h.....	Sidorfsky, Pollock
Davis, Beazley.....f. b.....	Praether, Howenstein

Officials: Masker, Kansas City, referee; Curtis, Michigan, umpire; Bonnfield, Kansas City, field judge; Erwin, Ft Riley, head linesman. Time of periods, 15 minutes. Attendance, 2100.

CHEERS FOR A DEFEAT.

Band and Rooters Met the Aggies on Their Return from Lincoln.

The college band and several hundred rooters met the defeated Aggie football team when they returned from Lincoln at one o'clock the morning of October 15.

It was a welcome much appreciated by the team which had just lost to Nebraska, 59 to 0.

The Origin of Artesian Water.

It is believed by many persons that artesian water is stored in the depths of the earth in great reservoirs, or exists as mysterious underground rivers which eventually find their way to the surface. It is true that the water is stored in underground reservoirs, but not as popularly supposed. With the exception of a few caverns of comparatively small extent, such reservoirs bear no relation to open basins of the surface type, but are as a rule rock strata or masses in which the only openings are spaces between the grains or along lines of solution, planes of jointing, cleavage, or bedding, or other fissures.

Bulletin 319 of the United States Geological Survey, entitled "Summary of the Controlling Factors of the Artesian Flows," by Myron L. Fuller, discusses the subject of the theory and behavior of artesian wells. A copy may be obtained on application to the Director of the Survey at Washington.

To Clean Screens.

To clean wire screens, dampen cotton cloth with kerosene, rub both sides. They look like new; also helps to keep flies away.—*Washington Herald*.

KEEP OUT OF THE MUD.

A FARMER CAN LAY HIS OWN WALKS AT LITTLE EXPENSE.

The Barn, Sheds, Well, and Garden May be Reached in Safety by the Use of Concrete, an Expert Says.

Why stalk around in the mud? Any farmer can build a cement walk. An inexpensive grade of walk could be laid to the barn, the sheds, the garden, and the well. It would be a paying investment. Think of the housecleaning that wouldn't have to be done. The walk wouldn't need to be more than three or three and one-half feet wide. A two-foot walk would do much better than none at all.

Here is a way to make a good cement walk. It is recommended by E. B. McCormick, professor of mechanical engineering at the Kansas State Agricultural College. Get these tools: A shovel, hoe, mud-box, hammer, saw, nails, and boards for the form of the sidewalk. A screen for the sand used in the top layer, a heavy sledge to break the stones, and a tamper can be used to good advantage. The stakes holding the boards on the side of the walk should be placed on the outside. Be sure the stakes will not slip. The form should be built before the mixing is begun. Then the walk is ready to be laid.

THE CAREFUL WORK.

First, place a sub-layer of crushed stones or cinders, two inches or more in depth, depending upon the probable dampness under the walk. This sub-base should be wet down and well-tamped. The main body of the cement is to be mixed according to the following proportions, by volume: one part cement, two and one-half or three parts sand, and five parts crushed stone, when stone is used. If stones are not available, use one part cement and five or six parts sand. This layer should be three or four inches thick. The top coat consists of one part cement, one or one and one-half parts sand, and should be three-fourths of an inch to one inch thick. This makes a five-inch walk, which is heavy enough for all ordinary purposes. In fact, a five-inch floor in the mechanical engineering building at the Kansas State Agricultural College holds the weight of an eight-ton engine.

THE TOP LAYER.

The dry sand and cement should be mixed until the mixture has an even color. Add the rocks and sufficient water to make the mixture pack well without too much tamping. It is well to wet the crushed stone and also the mixed sand and cement before adding the stone. The top layer, mixed the same as the first but omitting the stone, must be placed on the first layer soon after it is laid to insure a good union between the two coats. Using a wet top layer will cause a delay in smoothing this coat, but the walk will be much stronger. The wet mixture also gives a rough surface, which prevents the walk from becoming slippery.

Keep off your walks until they are thoroughly dry. They should not be used for three or four days after they are made. Crossings should stand two weeks before a heavy load is hauled across them. In hot weather the walks should be protected from the sun. This can be done by wetting the empty sacks and placing them on the walk; or by putting boards over the walk and piling earth on top.

The cost of a cement walk varies with the price of cement, sand, stone, labor, and width and depth of walk. The average bid is between fifteen and twenty cents a square foot for a five-inch walk. Of course this includes the cost of labor and a profit. By building the walks when the farm work is not crowding, the farmer can save paying cash for the labor.

SUB-SILOS NOT PRACTICABLE.

The Underground Type Has Few Advantages, Says O. E. Reed, Dairy Expert.

Underground silos are not practicable, thinks O. E. Reed, professor of dairy husbandry at the Kansas State

Men of Brains

Never get through studying books. If you are through

Going to School

let the

Kansas State Agricultural College

Come to You

Correspondence Courses:

Soils
Farm Crops
Stock Feeding
Poultry
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Butter Making
Orcharding

Drainage
Road Making
Concrete Work
Cooking
Sewing, and
Twelve others

Send for Correspondence Study Pamphlet. Let me have your wasted hours.

Director College Extension, Box G

Kansas State Agricultural College, Manhattan, Kansas

Agricultural College. Some inquiries about silos built underground have been received at the college recently. Farmers wish to know if they are cheaper and better.

Cement silos are much to be preferred to those built underground, Professor Reed believes. And the cost of construction is about the same.

The only advantage in the underground silo is that there is no danger of its being blown down. This advantage, with others, also is possessed by the concrete silo. The one great disadvantage of the underground form is the difficulty in getting out the silage. At feeding time it would require two men to hoist the silage.

A DAIRY TEAM TO CHICAGO.

Three Students of K. S. A. C. Will Compete for Cash Prizes and Taft Cup.

R. A. Cooley, W. H. Grinter, and K. B. Musser, with F. Buzard as alternate, left for Chicago last Sunday to represent the Kansas State Agricultural College in the students' judging contest at the National Dairy Show. O. E. Reed, professor of dairying, accompanied them. They will visit dairy farms in Wisconsin and near Chicago before judging at the show.

This will be the fourth students' judging contest held by the National Dairy Association. It is open to teams of three men from all agricultural schools. Four breeds of dairy cattle are to be judged: Guernseys, Ayrshires, Holsteins, and Jerseys. Eight prizes are offered, some for the best individual judges and others for the best team. President Taft offers a \$100 loving cup for the student who wins the individual contest.

MERLE THORPE WAS HERE, TOO.

The New Head of the Newspaper Department at K. U. Saw Football Game.

Merle Thorpe, newspaper writer for years, now professor of journalism, by grace of the regents at K. U., came in from Lawrence, last Saturday, in

time to see the football game, visit THE KANSAS INDUSTRIALIST, drop a few pearls of wisdom and a lot of compliments, and get back home for a late supper. Mr. Thorpe, upon whom the university may safely depend for the real thing in newspaper service, has had the experience that does more, even, than education to fit a man to direct others. He knows his business and you are sure of it when you meet him. His ideas of publicity are in line with modern thought. He knows news and he knows how to write it, which can be said truthfully of very few persons. And this is no "trade last" either.

Thirty Wear Scanty Clothing.

Thirty men have reported for track work and are taking preliminary work out every afternoon. Several of the old men are in school and expect to start their work in a short time. A coach has not been engaged yet. Professor Whelan says that he does not care to coach this year. Bob Christian, captain and speed merchant of last year's team, may be the coach. But a good team will be turned out, anyhow. Meets with several schools in the Valley probably will be arranged.

Word from Doctor Goss.

A letter has been received from Dr. L. W. Goss, of the veterinary department, now in Charlottenburg, Germany. His address, it is interesting to know, is 44 Spree street, but this, Doctor Goss desires to say, should not be misconstrued. He says: "I expect to remain in Berlin for the winter semester, which begins October 15 and closes in March. I am working under Professor Orth, a noted human pathologist. We are enjoying the parks, museums, galleries, and palaces and many other sights not to be seen at home. After THE KANSAS INDUSTRIALIST comes we will feel more contented to remain and I am certain I shall study with more vigor. Life is a blank without the paper."

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Number 4

TRAP MR. POSSUM, BOYS.

YOU CAN MAKE SOME MONEY IN HIDES AFTER SCHOOL HOURS.

There's Muskrats, 'Possums, Skunks, and Coyotes to Hunt—Skins of Musk-rats Are Worth 15 to 25 Cents Apiece.

Boys who like fun and a little pocket money, too, should put out a line of traps this fall.

Muskrat skins are worth from 15 to 25 cents apiece. The animals are easily caught and skinned. They are found in abundance along creeks, slow-flowing streams, and around ponds. Considerable money can be made by trapping them after school.

The muskrat lives in a hole the outlet to which is partly under water. A "live" hole can be detected by observing it closely for fresh tracks. Set a No. 1 steel trap at the mouth of the hole where the muskrats will have to cross over it to get out. Fasten the trap to a stake. Drive the stake in the mud under the water. The muskrat will dive as soon as caught and will stay under until it drowns. These animals usually begin to run about dark.

TRAPS FOR COONS.

The runways of coons are similar to those of muskrats, but larger traps should be used to catch coons. They fish along the edges of streams for clams and crayfish. They are very sly. Place a trap two or three inches under water, where you see tracks, fasten a bright object, such as a small mirror, or bright piece of tin, on the trigger to attract the animal's attention. Handle the trap as little as possible, as coons easily scent humans.

'Possums also may be trapped. A rock fence is a suitable place for them. They are easily caught. Find the hole and place a trap in it. Their runways are similar to the skunk's and often are mistaken for skunk burrows. They seldom are found under buildings.

Skunks live along rocky ledges, under stacks or corn shocks. The small, striped skunk often is found around farm buildings. Cover the trap with leaves or dry grass to make it look as natural as possible, as these animals avoid unnatural objects.

The ordinary large size, one-spring, steel trap is the best for the coon, 'possum, and skunk. It will catch them high up on the foot, preventing them twisting the leg off.

There's more sport in trapping coyotes. Get a beef head, or bony piece of meat, for bait. Take the bait to an open field and stake it securely to the ground. Place eight or ten double-spring, saw-teeth traps in a circle about two feet from the bait. Coyotes usually hunt in small bands, and in fighting over the bait will get into the traps.

HOW TO SKIN THEM.

To skin a muskrat, coon, opossum, and skunk, split the hide between two of the feet along the side, making as straight a line as possible, and cut clear back to the tail. Cut around the hind feet. Remove the hide by pulling over the animal's head. Stretch the hide by slipping it over a board and fastening it tightly. To skin a coyote, split the hide down the belly and remove the same as if you were skinning a steer. Dry the hide flat.

Making a rug from a coyote or other small hide is easily done. The only thing required is care, so that the "pickle" is not too concentrated. The "pickle" is the solution used to treat the hide.

Take a fresh hide and scrape off all the meat and fat. Care must be taken so that root hairs are not injured. Then soak in the pickle bath at least a week. Stir the pickle occasionally. Remove from brine and when nearly dry scrape again. Then stretch, work

ing the smooth surface of the hide over the edge of a board to break the fibers. To make the "pickle," take one gallon of water, a quart of salt, and a pint of pulverized or crystallized alum. Heat this mixture to the boiling point and allow to cool.

OILED FLOORS SAVE WORK.

And It Costs Less to Polish Them Than to Buy Carpet.

Oiled floors are more easily cleaned, more sanitary and less expensive than carpets. A room 14x14 will require one gallon of oil, which will cost \$1.30. Carpet costs 75 cents or \$1 a yard, and it would take 32 yards of carpet 27 inches wide to cover this floor.

Here is a way to oil either a hard- or soft-wood floor. Hard-wood floors are, of course, better than soft wood to polish. Smooth the edges of the boards and fill cracks with a filler made of glue, water, and sawdust. Use one pound of glue to two gallons of water. Dry thoroughly and have floors free from dust. Moisten a cloth in boiled linseed oil and turpentine and rub on boards rubbing with the grain. Use three parts of oil to one of turpentine. Dry and polish with a dry cloth. If the boards are new, apply hot oil freely.

Polished floors are more sanitary because all dust and dirt can be taken away, and very little dust is raised in the room if a dust mop is used. All rugs can be cleaned outdoors. If kept dry the boards will not decay, but water causes floors to rot.

To clean a polished floor use a soft brush and wipe with a dust mop. Clean any stains by rubbing the spot with a woolen cloth moistened with oil and turpentine. Dry the floor and polish with a weighted brush. This is a broad brush with a loaded top. A floor thoroughly polished twice a year can be kept in good condition by weekly cleanings.

APPLES ARE A GOOD TONIC.

Eat Many of Them While You Can and You'll Feel Better.

Do you know just what you are eating when you eat an apple? You are eating malic acid, the property that makes buttermilk so healthful, and gallic acid.

Sugar in a very assimilable form, consisting of carbon, hydrogen and oxygen, caught and imprisoned from the sunshine, is present in considerable amounts. And phosphorus is present in the only form in which it is available as a tissue-building material.

The acids of the apple diminish the acidity of the stomach. Apples are nature's best complexion makers. And the water in the apple is in its purest form—much purer than any drinking water.

The ancients assigned the apple as the food for the gods and believed that its juices furnished the nectar which the gods used to restore their youth.

Men are the gods of to-day and the apple is their royal food. Eat apples and you will put the doctors' trust out of business.

The First Anthracite.

Anthracite mining began in Pennsylvania in 1814, when 20 long tons were produced for local consumption. The year 1820 is, however, usually considered to mark the beginning of the anthracite industry, as in that year 365 long tons were shipped from the anthracite region. From 1814 to the close of 1910 the total production of anthracite had amounted to 1,946,717,383 long tons, or 2,180,323,469 short tons.

The best soup is made by cooking the stock the day before and cooking the vegetables in it the second day

DIG A CAVE FOR SPUDS.

UNDERGROUND IS THE BEST PLACE TO STORE POTATOES.

Don't Put Them in the Cellar, for They Will Rot and May Cause Disease, a Gardener Says.

Have you stored your potatoes? This is the time to do it. You can store them for very little cost and have them for winter and spring use, besides getting out-of-season prices when you take them out.

There are two ways of storing them—in trenches and in caves. A cave is the best, as the potatoes keep better and are easier to get out. "Potatoes should never be stored in a cellar or basement," says D. E. Lewis, assistant in horticulture, "as they do not keep well and may cause illness."

ON A HILLSIDE.

The potato cave should be dug on a hillside sloping towards the north, so that the entrance is protected from southwest winds that prevail during summer and autumn. Where the soil is moist the cave must be walled. Posts along the side support the roof, which is built of poles. Over the poles is a layer of coarse hay and then a layer of dirt about two feet thick. The roof should be well drained. This cave can be made any size desired. The bins should be built on raised floors and away from the walls, with spaces between the boards through which the air can circulate.

The best system of ventilation—the one which gives an even temperature—can be obtained by a ventilation pipe from the floor to an opening on the surface of the ground several rods from the cave. The pipe should have valves at each end, to regulate the supply of air. The air, passing through the pipe, is cooled in summer and warmed in winter, and is thus brought to about the right temperature. There should be several flues at the top that are equal to, or greater than, the capacity of the inlet pipes. These vents, also, should have valves.

HAVE AN OIL STOVE.

An oil stove should be provided for the cave. Also a reliable thermometer. It is much cheaper to use 25 cents' worth of kerosene than to let your potatoes freeze. They will freeze at 32 degrees. The temperature in the cellar should be kept between 36 and 40 degrees.

In experimenting with storage at different temperatures, the Kansas Agricultural College has found that there is a loss of 10 per cent when stored at 50 degrees. In speaking of this, Mr. Lewis says:

"The temperature and humidity must be kept constant. There is great danger of loss in varying temperatures. The air should be kept dry, as moisture is conducive to fungi growth. Shrinkage varies from 5 to 15 per cent during the winter."

A MULCH MADE BIG POTATOES.

Sawdust in this Man's Garden Kept the Moisture During the Drought.

Potatoes averaging twelve inches in circumference were grown in a Manhattan back-yard garden this year. G. C. Uhl, who tends a small garden during spare minutes, did it by mulching his potato patch with sawdust along in June when the drought began.

Mr. Uhl is employed in a planing mill. He noticed great piles of sawdust and shavings accumulating around the mill and the thought came to him that he might use them to cover his potato patch and thus conserve the moisture which the hot winds were taking away. He lost no time in putting this idea into action and several wagon loads of the waste were spread

among the potatoes, making a mulch about five inches deep. This was done about the middle of June when the ground already was beginning to get dry. One end of the plot was watered once or twice during the summer, but, apparently, the potatoes dug from that end were no better or larger than those from the other end. The plot consisted of seven 60-foot rows and the potatoes used for planting were not of unusual size or quality. They were the ordinary Early Ohio variety and were planted April 20. From those seven rows Mr. Uhl dug more than five bushels of choice potatoes.

ROOTS A GOOD STOCK FOOD.

Carrots, Turnips, Beets, Mangels, and Potatoes Will Keep Animals Healthy.

Better plant that extra patch next year in vegetables for your live stock. Beets, potatoes, carrots, turnips, and mangels are good food for animals. They are easily digested and keep the animal in good health.

Roots should be prepared properly before being fed. They should be shredded or sliced and mixed with chaffed hay. They also may be cooked or steamed, which makes a mash of them.

Beets are fed quite extensively in sections where sugar beets are grown and show good results. A test with ten cows made in France shows that it is more profitable to feed the residue or pulp from the sugar factory to cows than the whole beet. Mangels are very good feed for dairy cows and sheep. From 40 to 60 pounds may be fed to dairy cows daily. Fattening cattle may have 100 pounds and pigs four to twenty pounds, daily, in proportion to their size.

Carrots may be fed to horses and cattle. They will prevent glanders and digestive troubles. Potatoes and turnips are also good for stock and may be fed in much the same way as beets. A farmer who has fed roots to his stock for many years says that by feeding two-thirds roots and one-third grain he receives good results. Roots may be kept for winter use by storing in piles of twenty bushels each and covering with straw and earth.

A ROOM MADE COZY.

For a Small Amount a Girl Furnished and Decorated Her Den.

This is how she did it: Having in her room a cot, a dresser and commode, a study table, a clothes press, three chairs and a rocking chair, she decided to make it look more homelike and cozy.

The wall paper was in two tones of tan, the wood work in light green, and the carpet was green with tan figures. Therefore she draped the cot with two brown portiers which she had, and with several sofa pillows added a pleasing tone of color. For fifty cents she bought cracker boxes and made a cupboard for some dishes and an alcohol stove. Three more boxes made a small case for her books. These she covered with scrim having a tan background and green figure, and cream net was used to make curtains for the two windows. In all, the curtains cost about \$2.

To avoid a gaudy appearance she bought several good pictures for the walls and a dresser set of eight pieces for her dresser. A couple of college pennants completed the decorations, which cost a total of \$14.75.

Importance of Manners.

Manners are more important than many excellent people imagine. Like safety, they are the price of eternal vigilance; they are a compendium of all the virtues and the graces, and imply an exquisite heart and an intelligence swift and nimble of flame.—*Harpers Weekly.*

AS TO THE HIRED MAN.

WHY DOESN'T SOMEONE RESOLVE A FEW COMFORTS FOR HIM?

Rain or Shine, He Must Work Just the Same, and His Room is a Dreary Place Nearly Always.

How about the hired man? The good people of this country show much excitement about the boys and girls on the farms, and about mother—and they knock on father, for further orders—but do you ever hear a kind word for Mr. Hired Man? Not one.

To persons born and reared in the country, or born and raised—have it your own way—a hired man means a man who works by the month. Those working by the day are called, simply, "hands."

But what does the difference mean to the hired man? Only that his pay goes on all month, whether rain falls or the sun shines, and that his work is never over. It means that he must do the chores, and, if it rains, grease harness, fix fence, weed the garden, and do a hundred other things just because he's the hired man.

True, he gets paid for it, but how much? Very likely about \$25 a month, while those that work by the day may make \$22 to \$25 during the same time and not have to work during the rainy days, or do chores, either.

The hired man, usually, must sleep in a room containing nothing except a bed. Of course there is only one thing to induce him to stay in such a room—and he usually has a large store of that on hand—weariness. Usually, too, the hired man's room is an outbuilding, or a room "fixed up" in the granary, or haymow.

These things, trifling to the employer, are the things that make life irksome to the farm hand. Is it any wonder good men are hard to get? If a neat room with a little furniture could be provided, life to the hired man would not be such a grind. And if he could have a little more time for his own use it would do much to break the monotony of farm work.

On the whole, there is little recreation for him, and this is the main reason he has for getting another job.

THE COLLEGE IN DEMAND.

President Waters and Two Others Are Invited to Speak in Kansas City.

The Kansas delegation to the Trans-Mississippi Commercial Congress, to be held in Kansas City two weeks hence, is to include three members of the staff of the Kansas State Agricultural College. President Henry J. Waters, Professor William M. Jardine, head of the agronomy department, and W. S. Gearhart, state highway engineer attached to the college, have been invited to address the congress on subjects to which they have given special attention. President Waters, however, is scheduled for an address in Columbus, Ohio, the day his presence is desired in Kansas City, and he may have to forego the pleasure of attending the congress. If so, he will have a substitute.

Professor Jardine is now serving as a member of a board of three experts chosen to judge the products of the continent, now on display in Madison Square Garden, New York, in the American Land and Irrigation Congress. His place in Kansas City will be taken by Prof. A. M. TenEyck, superintendent of the Western Kansas Experiment Station, at Fort Hays. Mr. Gearhart will attend the congress and speak on "Good Roads."

Boiling liquids, jellies or fruits may be turned into glass without breaking the vessel if you press the bowl of a spoon on the bottom while filling.

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PRES. H. J. WATERS Editor-in-chief
PROF. C. J. DILLON Managing Editor
DR. J. D. WALTERS Local Editor

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The typesetting and other mechanical work is by students in the school of printing, of which J. D. Rickman is superintendent. Both these departments are in Kedzie Hall.

Newspapers and other publications are invited to use the contents of the paper freely without credit.

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SATURDAY, NOVEMBER 4, 1911.

TWO THINGS TO DO.

[A little chapel editorial by R. H. Faxon, of the Garden City *Telegram*, in student assembly Wednesday morning, November 1.]

If I were to bring you a message, which I do not attempt to do, I should say that when you have finished your work at this useful institution you should not only go back to the farm but you should go back to the place whence you came.

I sometimes think that young men and young women too often insist on seeking a new field for beginning life. Possibly that may be the thing for the lawyer or the doctor or the young man who wishes to enter newspaper work, or the preacher or the aspirant to a business career; but I believe if every young man and young woman who leaves this institution should go back to the old home and do two things, it would not be a matter of a generation but a matter of only a few years until conditions had changed mightily in neighborhoods all over Kansas. These two things are:

First.—Try actually to compensate the father and the mother who so often make it possible to get this useful education.

Second.—Try to show the father and the mother wherein the methods you have learned are superior to those they have practised.

The first will be easy, for there is no husky young man or sturdy young woman who cannot take off from any father's or any mother's shoulders sufficient burden to give some compensation at once for what the fathers and the mothers have done in sending you here as their contribution to the state's efforts for a more useful citizenship.

The second is a somewhat delicate proposition. Fathers and mothers sometimes resent the intrusion of methods not their own, methods new and doubtful to them, and yet you can do it if you are tactful. Many a farmer will agree that the son has learned a better way than he, and many a mother that the daughter has found a system that brings some relief.

We move slowly and things are not done in a day. The complete transition of Kansas and Kansas farms and homes into what they should be will take time; but the work has to be done, and very largely you who are here before me to-day are to be the instruments. It has been possible for you to be here, partly, of course, on account of your own efforts, your own savings and denial, but also because of the sacrifice of parents and the beneficence of a state.

Therefore, when I say to you that I hope you will go back to the place whence you came, I mean that I hope you future soil specialists, crop experts, engineers, and house and home managers, will not feel it incumbent on you to go to Massachusetts or California, but will stay in Kansas.

The fathers and mothers of many of you were Kansas pioneers. They conquered prairies and the uninhabitable places and made them what they are to-day. Their work was done, but to you they bequeath a legacy. We move forward in successive stages.

Therefore it is well, it seems to me, and it is a duty, to take up the work just where your fathers and mothers left it, and see if you can carry it on as well with the training you have had as they did without training. If you can do it, and do it here in Kansas, in every one of the 105 counties, you will have repaid the father and the mother, shown your appreciation of a paternal state, taken up the work of construction where your elders left it, built a commonwealth just as surely as your pioneer fathers did—done that greatest thing in life, lived a useful citizen.

ANTI-HOG CHOLERA SERUM.

The production of anti-hog cholera serum is certain to revolutionize the hog-raising industry of the country. Kansas being a state well fitted for this industry, naturally a corn and alfalfa state, and possessing an ideal climate for pork production, it is proper that the authorities should increase the production of the serum.

The experience of the veterinary department has demonstrated that proper vaccination will check the disease and cure the infected animals, if done before they are too severely affected. Reports of over seven thousand hogs vaccinated show a saving of an average of over ninety per cent of the animals vaccinated in herds that had lost from five to fifty per cent of their original numbers.

The Kansas Agricultural College has equipped a plant to produce this serum, at a cost of over six thousand dollars. It has been the policy of the management to keep its product up to the highest standard possible. The work is therefore done almost wholly by expert help. The efficiency of the present force is shown by the field results, and is further attested by other state experiment stations that have called upon this station for material with which to start or to reinforce their work.

REFORM THE COUNTY FAIR.

County fairs usually spend too much money, time, and effort on the speed department. The race track is featured at the expense of the live stock and farm crops departments. And it is a mistake. Kansas farmers are more interested in well-bred hogs, cattle, and corn than they are in fast horses.

At Yates Center, where one of the best county live stock fairs is held, there is no speed department. There never has been a "hoss race" in the history of the association. And the fair has been built up in five years from a cash capital of nothing until now this association owns buildings and grounds, a large sale pavilion, and gets exhibits from herds in all of the surrounding counties. And the management has done all this by cutting out the fake "features," in which the farmer is not interested, and giving him something worth while.

For there are other features that need to be eliminated with the horse race. The fake show needs removing worse than anything else. The average carnival show is not refined or even interesting. It is not a proper place for the boys and girls to go. And the fair that refuses to give space to the fake shows and to most of the professional hamburger and "lemon" stands is taking a step in the right direction.

Let the local church and other home associations handle the refreshment stands. They will be glad to do it if they do not have the competition of a drove of brass-lunged fakers who make it a business to discourage in every way possible stands managed by local men.

And, lastly, don't spend a lot of money to get some out-of-town band. The chances are that the local band can play just as well and, usually, it will do it for about half what an outside band would cost. Give the local people a chance.

F. B. N.

ON YOUR WAY, COLONEL.

Happiness, says the philosophical Col. Edward H. Green, son of Mrs. Hetty Green, consists of being successful in the eyes of others. Not entirely, Colonel. Your mother didn't gain her happiness that way—not

"I Believe—."

I believe in my job. It may not be a very important job, but it is MINE. Furthermore, it is God's job for me.

I believe in to-day. There is no assurance of to-morrow. I must MAKE GOOD to-day.—Charles Stetze.

much. She wouldn't have cared a bit how much money other folk believed she had if she—Mrs. Hetty Green—didn't have the long green stored away in bales under the mattress. That has always been a failing of the Greens, and you know it, Colonel, and it ill becomes you to start in now preaching and trying to make out you are a philosopher. The day you gobbled up the first little road in Texas, a long time ago, and paid for it out of money you earned with pick and shovel—not—was the happiest day of your life, but you didn't think about what the public thought until after the road had been wrapped up and sent home, did you? You thought of how cheaply you had gotten it, and you wrote back to mother and told her, and you were so happy—so happy.

You cannot define happiness, Colonel, for this big world, upon the Green family standard. Bless her heart, Mrs. Hetty had a perfect right to gather in all the scads she could. She found her happiness in that way. John D. Rockefeller finds his in imagining the people think better of him and that he has eased his way heavenward. A farmer's wife may find her joy in an engine to lighten her labor. The writer, the reporter, may be happy when he breaks into print with an original thought despite the copy readers. We all have our standards, Colonel. Yours is money.

TO BE REMEMBERED.

What a fine, comforting thing it would be: To know that after all the struggle and the work you would be remembered, as Senator Harris, for instance, is remembered by a host of loving friends! And how strange it is that so few ever think of this, or try to live so that when they have gone the throngs that stand lonely on the shore will mourn their loss.

How queer it is that so many men and women, more's the pity—can be spared with no regret, whose final call stirs within us only an almost irresistible impulse to yell our delight! But what ineffable joy it must give good men and good women to feel that, in the final accounting, there is no red ink, that no man can truthfully say, "He wronged me and mine."

Isn't it worth all the toil and disappointment that can be piled your way to feel that, even if you do have to wear last winter's overcoat, even if your wife does deny herself the rupture of entertaining someone whose income is double yours, you can poke your head through the clouds—afterward—and see the world passing by your monument with bowed heads, sorry you've gone? You just bet it's worth while.

THE COLLEGE GRADUATE.

Don't expect too much of the college graduate, man or woman, says the *Orange Judd Farmer*. They are just starting. They know nothing of practical problems from experience. This is saying nothing against the college people. They ought to be much better equipped to meet the problems of life than those who have not had the advantages of collegiate training.

Next month thousands of young men and young women will get their diplomas from agricultural colleges. Do you realize what this means to agricultural communities? Many of them, in fact a majority, will go back to the farm. They will attempt to put into practice some of the things they have learned at college. Don't sneer at them. Don't discourage them. Of course they will make mistakes. That is to be expected. Give them a chance to try their wings. You must admit that there are many opportunities for improved agriculture, for advanced farming. Unless it comes from these

young people who have been thoroughly instructed and enthused, it will not come at all. Consequently give them a chance. Give them your advice, not your condemnation. Some of them will need restraining. Do this kindly. Some of them may have overconfidence. They will get over this in time. It won't do them any harm to have a good opinion of themselves, and it will enable them to accomplish great things. The agricultural college, in fact any college, is of great benefit to any commonwealth, and its graduates should be given a fair chance.

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EVER USE ANY PEAT?

Not the Product of "Bony" Scotland, but the United States Brand.

Didn't know there was any peat in this country, did you? Thought Scotland, where the golf comes from, was the only peat producer? Strange what things one can learn about one's own land if only one scrapes around a bit. Charles A. Davis, of the United States Geological Survey, presents a few interesting facts about this industry in a recent report.

The fact that there is a market for peat has not been questioned, for the small quantity of the product offered has always been sold readily and at good prices. The report describes a considerable use of peat as a fertilizer, and a fertilizer filler, and of peat moss as a stable litter and even as an ingredient of stock food. The production and consumption of peat in 1909 was 1145 tons used for fuel, valued at \$4145; 26,768 tons used for fertilizer, valued at \$118,891; and 1245 tons used for stable litter, valued at \$4006—a total of 29,167 tons, valued at \$127,042. There was also imported 9408 tons used as stable litter, valued at \$47,227.

OLD HENS' CHICKS ARE BEST.

Don't Sell All These Reliable Egg Producers—They're Valuable.

Don't sell all your old hens. If you intend using eggs from your flock for hatching, you should keep a few old hens to furnish them. The resulting chicks will be stronger and heartier than if incubated from eggs laid by your spring pullets. The offspring of the more mature stock will also prove more thrifty and vigorous.

These facts were determined by several tests made at Morgantown, West Virginia. Eggs from hens one, two, and three years old were used. In every test the eggs from the older hens hatched out more, heavier and stronger chicks than did the eggs from the pullets. And the chicks did not lose this advantage in weight, for they were materially heavier at the end of forty days when the tests ended.

It was also determined that it is a matter of prime importance to have the hens not only mature but unexhausted by previous heavy laying, during the breeding season. Then the very best results will be obtained in respect to number, size, and vigor of the chickens.

METALS IN NINE STATES.

Here is the Record Just Completed by the Geological Survey.

The final figures of the production of silver, copper, lead, and zinc in the Central States during 1909, compiled by C. E. Siebenthal and B. S. Butler, of the United States Geological Survey, have just been published and may be had on application to the Director of the Survey at Washington.

The total production of these four metals in the states named in 1909 was \$63,992,548, as compared with \$56,326,703 in 1908. The production for 1907 was \$77,697,457.

The following table shows the values by states for 1908-'09:

	1908	1909
Arkansas.....	\$58,130	\$57,144
Illinois.....	196,001	259,000
Iowa.....	41,414	6,876
Kansas.....	1,538,698	1,347,880
Kentucky.....		7,772
Michigan.....	29,601,603	30,588,693
Missouri.....	22,256,571	27,776,284
Oklahoma.....	575,330	1,137,770
Wisconsin.....	2,058,956	2,818,100
Total.....	\$56,326,703	\$63,992,457

In stewing an old chicken a little soda or vinegar added to the water will make it quite tender.

November Birds.

When the maples flame with crimson
And the nights are still with frost.
 Ere the summer's luring beauty
Is in autumn glory lost.
 Through the marshes and the forests
An imperious summons flies.
 And from all the dreaming north-land
The wild birds flock and rise.
 From streams no oar hath rippled
And lakes that waft no sail,
From ræches vast and lonely
That know no hunter's trail,
The clamor of their calling
And the whistling of their flight
Fill all the day with marvel,
And with mystery the night.

As ebb along the ocean
The great obedient tides,
So wave on wave they journey
Where an ancient wisdom guides;
A-through November's hazes
They vanish down the wind,
With the summer-world before them,
And the crowding storms behind.

—P. McArthur, in *The Christian Science Monitor*.

SUNFLOWERS.

Is the Rotary Club of Wichita made up of rounders? Huh?

The Santa Fé trail appears to be much longer than was at first hoped.

Mrs. Margaret Deland says genius is not a bar to happiness. By the way, if it isn't too personal, where is Mr. Deland?

The lemon growers' association of California gave President Taft a very cordial welcome. Did this mean anything personal?

Gen. Li Yuen Heng, who has declared himself president of the Chinese Republic, is said to be a bad actor. Does he forget his que?

We confess that we missed the report of the latest Gotch-Somebody contest. And we are getting along very well, too. How did it end, anyway?

"Shot his sweetheart," says the Clay Center *Republican*, in announcing a tragedy at Pierce City, Mo. If the name is right she deserved it.

The second Hyde trial, the papers say, will be speedy. But this is only newspaper talk. The only speedy part of the trial will be the objections.

The sheriff at Concordia has been charging prisoners board in the county jail. The *Blade* deplores this as unjust, but it may—who knows?—discourage appeals in many cases.

The good old editor who declares, "It is time to call a halt," now operates the Clay Center *Republican*. But he referred to the "paralyzing influence" of free trade, so let it pass.

Contrary persons, says Frank Crane, in the *Chicago News*, are necessary. They keep things stirred up constantly, they keep the social stream pure. Plenty of contrary persons in Kansas, all right, all right.

A man at Concordia, on trial for his sanity, declared he had been drinking everything from extracts and bitters to camphor and turpentine. The chances are he had also a few gulps of Manhattan's city water.

The Iron Mountain railway objects to reporters collecting news items on its trains. It must be mighty important news that would induce any person to stay on an Iron Mountain train a moment longer than necessary, especially in the Ozarks.

The Buffalo *Times* may save itself any excitement about the ease with which cyanide of potassium is to be obtained. It may be picked up by the bucketful in any foundry. It is one of the very easily obtainable drugs. The Hyde trial did much to draw it to the attention of persons who should not have access to it.

Sixty-five thousand club women of New York have protested against the teaching of higher mathematics, Latin, and Greek in the public schools. They have demanded that the board of education eliminate these studies. Still, mathematics is necessary if the girl is to figure out how to cook with a Latin or Greek education.

Do we understand that Gov. Woodrow Wilson is to run for the presidency on a platform condemning ragtime in hymns? Is it true that he has declared idiotic such fine old friends as "Throw Out the Lifeline," "When the Roll is Called Up Yonder," and "Sweet Hour of Prayer?" Is that your attitude, Woody?

ALUMNI NOTES.

R. N. Allen, a junior electrical engineering student last year, is working for the Santa Fé at Albuquerque, New Mexico.

George M. Hammond, a Duroc-Jersey hog breeder, held a fall sale of thoroughbred stock in the stock pavilion, Tuesday, October 31.

John Schlaefli, '11, is working for the electrical engineering department. The department had more work than student help could do, so a regular man was employed.

C. S. Marty, '96, was here for the unveiling of the Harris memorial. His home is in Lake City, Barber county, Kansas. Mr. Marty has not visited the college for thirteen years. He noticed many changes.

H. H. Harbecke, '11, is with the Westinghouse Electric and Manufacturing Company with headquarters at Pittsburgh, Pa. At present there are thirteen other graduates of the Kansas State Agricultural College at the same place.

COOK IN A PAPER BAG.

A Few Pointers About a System that Saves Much Washing.

Paper-bag cookery is an economical and time-saving method of cooking. This is how you go about it:

Take ordinary oiled paper, or paper that is found in the markets for that purpose, butter it well on the inside, prepare the food as you would have it appear on the table (for the bag cannot be opened during the process of cooking), place in the paper, fold well at the ends, and fasten with paper clips.

The oven must be quite hot before the bag is put in. Do not forget to put it on a wire shelf. The paper will brown during the cooking but will not burn.

There are some disadvantages in the use of the paper bags, but there are more advantages. One is not able to cook anything that requires agitation during the cooking, or any sort of soups, but here are some of the advantages: No pots and kettles to clean, less time required for cooking, no loss of weight. Here are some recipes for paper-bag cookery:

Beef Loaf.—Cut six slices of raw beefsteak very thin; flatten, and season with salt and pepper. Make a dressing by chopping one ounce of bacon, one fourth onion, a little parsley, one ounce ham, and a few beef trimmings; mix together with little spice, a few bread crumbs, and bind altogether with an egg. Arrange alternate layers of steak and dressing, roll up, and truss firmly with a string. Place in a buttered bag, with two tablespoonfuls of butter and a teaspoonful of caramel. Fold and fasten bag and cook for thirty-five minutes in a moderate oven.

Bananas with Bacon.—Split in half, lengthwise, six bananas (not over ripe), sprinkle with pepper and salt. On each place a strip of thinly sliced bacon, half and half meat and fat. Place carefully in a buttered bag, fold and fasten, and bake in a hot oven ten or twelve minutes.

THIS MAKES DARNING EASY.

An Embroidery Hoop Attached to the Sewing Machine Does the Work.

Darning done on a machine is labor saving, durable, and neat. An attachment costing 75 cents will do the work, but an embroidery hoop is less expensive and as useful.

The cloth, such as stockings, table linen, towels, and sheets, is put on the hoop, wrong side out, so that the material lies flat under the machine foot, and right side up. Use finer needle and thread than for hand work, and the tension should be loose with a long stitch. Stitch back and forth one way until the hole is covered, then turn and sew across the first stitching. Leave the edges loose and patches can be sewed by this method. If the pressure foot is not lowered there will be greater ease in turning the goods.

A GAIN IN RUG MAKING.

Carpets Have Little Chance Nowadays in the World's Markets.

Everybody knows, of course, that carpets are not used now nearly so much as they once were, but the figures on the subject, furnished by the census bureau, are not uninteresting. The carpet is going and the rug is coming in. Hard-wood floors have

much to do with the change, not to mention other advantages.

From 1899 to 1909 the number of square yards of rugs manufactured increased from 12,172,000 to 35,596,000. The number of square yards of carpet manufactured decreased from 64,238,000 to 56,233,000.

The so-called "Smyrna" rug, which was never a thing of beauty, is disappearing, while the better class of carpets has increased moderately. The increase in certain varieties of rugs, like Axminster and Moquette, has been enormous, being from a third of a million to eight and a half million square yards. In Wilton, from a third of a million to nearly two and a half million; in tapestry Brussels, from a merely nominal amount to nearly six million, and in ingrain rugs and art squares, from less than three to more than six million square yards.—*Banker and Tradesman.*

THE WASTE OF GAS.

For Centuries It Has Been Burning in British India.

One of Stanley Waterloo's stories of prehistoric times contains a description of the region known among the cave men as the "fire country," where blue and red flames leaped from cracks in the ground. The young readers of the Story of Ab might find in "Mineral Resources of the United States for 1909," published by the United States Geological Survey, a parallel statement by United States Consul General Michael, of Calcutta, descriptive of a real fire country, located about twenty miles from Chittagong, British India, where natural gas blazes from crevices in the ground. The gas has been burning so long that the oldest inhabitant can give no idea of when or how it was set on fire. The general belief among the natives is that the gas has been on fire for centuries. At any rate, it has been burning as far back as any records have been kept by white people.

It is now suggested—and some steps have been taken to carry out the suggestion—that the fire be extinguished and the gas be brought under control and piped down to Chittagong for light and fuel and power. The citizens of Chittagong have concluded that it would be cheaper to utilize the gas than to introduce electricity.

BACK TO THE SOIL.

Pearl H. Skinner, Class of '07, Quits Architecture.

Pearl H. Skinner, of the class of '07, has given up his business as an architect and contractor to go to farming. Mr. Skinner has purchased an 80-acre farm six miles south of Eskridge, Kan.

Mr. Skinner regrets he did not take the agricultural course. He succeeded as an architect and contractor, but the call of the soil was strong and he yielded. He does not intend to go at farming blindly. He will take the correspondence course of instruction in agriculture as given from the extension department of the college and attend every "farmers' train" the college sends out that goes his way. Mrs. Skinner is also a K. S. A. C. graduate of the class of 1907.

BULLDOSE NOT BULLDOZE.

Why the Former is the Proper Form of this Word.

The Hayes-Tilden campaign of 1876 was hotly contested. In the South harsh methods were taken, especially with the negroes, to make Tilden votes. A society called "The Stop" was organized. Its methods were summary. If a negro refused to join, and vote for Tilden, he was taken to the woods and whipped nearly to death. This was giving him a "bulldose."

This expression had long been used in certain localities in the South to mean a dose of medicine fit for a bull. As a result of its use in this campaign it became current all over the country. "Bulldosed parish" became a synonym for a district in which violent methods had been used to get votes. The word is now spelled and pronounced *bulldoze*. Just how or why the form and pronunciation of

the word have changed is not clear.

FIRST AID TO "COMPANY"

EMERGENCY SHELVES WITH "READY-MADE" FOOD PREVENT HYSTERIA.

When a Guest Comes Unexpectedly Just Take Down the Waiting Meal and Your Good Reputation is Saved.

What do you do when unexpected company comes to dinner the very day you had planned to give the family a pick-up luncheon?

If you are numbered with the prudent housewives who keep emergency shelves, you'll have an appetizing meal all planned before you've finished telling your guest how glad you are to see her. Three quarters of an hour later, you and your guest will be enjoying a dainty meal of perhaps tomato soup, scalloped salmon, French peas, creamed potatoes, apple and nut salad, sliced pineapple, and nabisco wafers. And your reputation as a hostess will have been saved.

There need be no confusion, no mad rush to the grocery store, no hasty borrowing from neighbors. Everything for that meal but the potatoes and apples was ready and waiting on the emergency shelf. Nice thing to have, isn't it.

Many different articles might be placed on the emergency shelf, but everything on it must be ready for immediate use. A bottle of salad dressing, several cans of tomatoes, corn, peas, and various canned fruits are essential. For meats, you can take your choice of dried beef, salmon, sardines, potted ham, tongue, and roast beef. Condensed soups, which are ready to serve upon thinning with hot water and bringing to the boiling point, a can of pork and beans, nuts, crackers and wafers in inner-seal packages, and condensed cream also are valuable as first aids to the housewife.

There are two iron-clad rules for a successful emergency shelf. The first is: Never use anything from the shelf except in case of an emergency. If you break this rule, you will defeat the purpose of the shelf and run up your expense account. The second rule is: Always replenish your stock before it runs low. Keep these rules faithfully, and your peace of mind when company comes will be a rich reward.

TO PRESERVE STRAWBERRIES.

You Can Keep the Size and Also the Color of the Fruit—The Recipe.

The object in preserving fruit for future use is to have a fruit which will keep well, look well, and taste well. The color and flavor of strawberries are changed by long, hard cooking, so the less heat used in preserving them the less the color and flavor are changed.

Use equal weights of sugar and berries. Put the berries in a preserving kettle in layers, sprinkling sugar over each layer. The fruit and sugar should not be more than four inches deep.

Heat the fruit slowly, skimming it carefully when it needs it. Let it boil gently for ten minutes from the time it begins to bubble.

Pour the cooked fruit into platters, having it two or three inches deep. Set the platters in a sunny window in an unused room and leave it three or four days. The fruit will grow plump and firm and the syrup will thicken almost to jelly. Put this, cold, into jars or tumblers. It need not be sealed air-tight because of the large amount of sugar used, but should be covered to keep out dust and mold.

DON'T BUY LARGE AMOUNTS.

The Grocery Bill May be Less, but the Food Will Spoil and Then—

[This writer, a girl, differs from one, last week, also a girl, who urged the wisdom of large buying.]

Buying household provisions in large quantities is not, as some writers assert, the sovereign cure-all for the high cost of living. To get any appreciable reduction in prices the average housewife must buy foodstuffs in such large amounts that it is impossible for the family to use them inside of three months, or perhaps half a year. It also necessitates paying

out larger amounts at one time than is advisable when the family income is limited and barely sufficient to meet the many demands upon it.

The only way the average housewife can make buying in large quantities pay, is to form a co-operative buying association with her neighbors. In this way enough is bought at once to obtain a reduction in prices, and by a division of the purchases no woman is put to the necessity of making her pantry a small grocery store and of assuming a grocer's risks.

Breakfast foods, rice, corn meal and other cereals become infested with insect pests if kept for some time, and the few cents saved on the purchase price is lost in the waste that follows. It is a saving, however, to buy these foods in small amounts in the bulk instead of by the package. Then there's another objection to buying in quantities. You may save perhaps one cent a pound by buying sugar in 100-pound sacks instead of by the dollar's worth, but you must watch closely or you'll lose that profit. It's much easier to be extravagant with sugar, you know, when there's a whole big sack full in the storeroom than when there's just a little in the drawer of the kitchen cabinet.

THIS DEVICE SAVES STEPS.

A Little Elevator from Kitchen to Cellar is a Hard Worker.

A device that will save the dozen and one daily trips from kitchen to cellar, and drive the ice-man from the door, seems too good to be true. Yet it is so simple and inexpensive that it is within the reach of any housewife," says Miss Ula Dow, assistant professor of domestic science in the Kansas State Agricultural College.

It is simply a small elevator two feet square with several shelves one foot apart on which to set food, all lowered by pulleys from the kitchen into a cement shaft in the cellar. This shaft is slightly larger than the elevator itself, so that the elevator will run easily, and extends four feet below the surface of the cellar floor, making a cold-storage compartment. There should be a small ventilation pipe for the shaft and a door opening into the shaft from the cellar so that it may be cleaned. The pulley ropes should be slightly shorter than the shaft, and the weights heavy enough to prevent spilling and breakage by the jar of striking bottom, or too hasty descents.

A trap door in one corner of the kitchen floor furnishes the opening into the cold-storage compartment. If there is electricity in the house, a small bulb may be placed at the top of the shaft to light it.

The total expense of such a cold-storage plant and elevator would not exceed \$20, and if the man of the house is handy with tools the cost may be lessened.

ONE THIRD OF A CUBIC MILE.

That is the Amount of Soil Washed Into the Ocean Annually.

It takes only 760 years to wash an inch of soil off the face of the United States. If you should try to catch all the matter that is being washed to the ocean by the rivers of the United States, it would take you 760 years to catch enough to cover the United States one inch deep.

That doesn't mean much, does it? At that rate you could almost put the entire wash for one year in your pocket. It would make a block only one mile square and 581 feet deep. That is a little more than a third of a cubic mile and weighs but 610 million tons.

The United States Geological Survey estimates that if this erosive action had been concentrated on the Isthmus of Panama it would have excavated the ditch for an 85-foot level canal in about 73 days.

The prosperity of a nation depends, not on the abundance of its revenues, nor the strength of its fortifications, nor on the beauty of its public buildings, but on the number of its cultivated citizens, on its men of education and character. Here are to be found its true interest, its chief strength, its real power.—Martin Luther.

HE WAS GOOD TO TREES.

WILLIAM CURRY, A FORMER STUDENT, MADE A USELESS ORCHARD YIELD.

Course at the Agricultural College Taught a Young Orchardist to Fight Pests and Dry Weather—He Harvested 7000 Bushels.

Care for an orchard properly—let this be said once more—and it will repay you well. William Curry, who lives in Jefferson county, took a loaning orchard that seemed to be worthless and made it pay real money. Here's the way he did it. It's just a short story.

He attended the Kansas State Agricultural College one term in 1908 and two terms in the school year of 1910-'11. He was interested in fruit growing and in spraying, so he gave most of his attention to that work.

HE BOUGHT IN HASTE.

Now in Jefferson county there are many orchards that were set out in the first flush of enthusiasm over the first great apple crop that Kansas produced. At that time the codling moth, the San José scale, the canker, and rot, and other troubles did not worry the Kansas orchardist. One of these orchards was offered to Mr. Curry and he accepted in haste. A 120-acre farm, 95 acres in apple trees, was offered to him for \$500 a year cash rent for three years, and an option for seven years longer, at an increase of \$50 a year. The owner of the orchard saw no profit in fruit growing. That big orchard was a burden to him. As corn land, the farm was worth about \$4 an acre rent, but that was all. Strange that Mr. Curry should see a profit in all that seeming waste of land.

Mr. Curry left school at the end of the winter term. He obtained help and pruned his Missouri Pippins; bought a gasoline engine spraying outfit and got busy. And he kept busy. The frost killed some of the fruit, but on 30 or 40 acres the trees fared better. He put in a reversible disk and with four horses kept after the ground until it would take moisture, hold moisture, and admit air. He did this throughout the dry weather and when the August rains came his orchard was in good condition.

HE'S MADE IT PAY.

From the 30 or 40 acres of this useless orchard he gathered between six thousand and seven thousand bushels of apples. The number one's he is packing for storage. He is loading the number two's on cars and shipping them to central and western Kansas and receiving 60 cents a bushel on the car, a good price. He has made money.

Now he is thinking of orchard heaters and oil storage. He intends to construct a cistern for oil on a hillside and draw the oil off by gravity for his heaters. The orchard will be given a light pruning this winter. Mr. Curry expects to make the dormant spray, the cluster cup spray, the blossom fall spray, and at least two more, depending on the weather conditions and the conditions of the orchard.

HOW TO PRESERVE CIDER.

Heating it to a High Temperature Before Storing Will do it.

The best way to preserve cider is to heat it to a temperature of from 170 to 180 degrees. Keep that temperature for about ten minutes, when the cider should be bottled in air-tight bottles and stored away in a cool place. The heat kills the bacteria which cause cider to get "hard." Sweet cider, kept on sale, generally is preserved by use of benzoate of soda, which does not change the taste.

Apples of which cider is to be made should be either good ones or culs with the rotten spots cut out. After the cider is made it is better to strain it before putting it away or using it. Green or early apples do not make as good cider as fall and winter apples. Winter apples contain about 2.5 per cent more sugar. Fresh cider contains about 85 per cent water, 12 to 15 per cent solid matter, and a little malic acid, which is the natural acid of the apple.

AS COL. TRUE KNEW HIM.

AN APPRECIATION OF SENATOR HARRIS BY AN OLD ARMY FRIEND.

The Memorial Was Erected, Not for What the Man Had Done, but for What He Was to American Manhood.

It was impossible, last week, to present the very interesting address of Col. J. F. True, of Topeka, as chairman of the Harris Memorial Fund. It gives pleasure, now, to print a part of the address, and especially that part referring to Linwood Farm and the shorthorns. Colonel True said:

"I am sorry you did not all know our dead friend as some of us knew him. If you had all known him, it would seem to many of you, as it seems to some of us, that, somehow, he is here with us, that we can almost hear his low, kindly, firm, well-modulated voice, can almost feel the firm, gentle, familiar handshake.

"In this presence we would be honest with ourselves and with him. We would not utter a word of fulsome praise, for to him sincerity was a jewel.

FOR WHAT HE WAS.

"We esteem our friends for what they are, not for what they do. We were moved to start the building of this memorial because he was what he was, not for what he had done, although he had done plenty to merit it.

"As a promoter of his favorite breed of cattle, the shorthorn, he stood preëminent. As a politician, statesman, he was phenomenal. As a thinker, he was logical, sound. As a conversationalist, he was charming. As a friend, he was steadfast. In mentality, personality, individuality, in presence, he was superb. As Captain Waters said of him: He was the man he himself would like to have been. Many of us may well echo that sentiment.

"At Linwood, thirty-eight miles west of Kansas City, he thought and wrought and achieved success within ten years that few others have attained in a lifetime. As in cattle breeding the bull is always half the herd, we will note farther on how the blood that went out from Linwood soon, in a measure, dominated the shorthorn field in all the Central West.

"Frank D. Tomson, a graduate of this college, one of the owners of the Tomson herd of shorthorns at Dover, says: 'I believe that I have never encountered from any other source cattle that proved as prepotent in transmitting their valuable qualities, generation after generation, as the Linwood shorthorns.'

LINWOOD THE MECCA.

"He says, 'Linwood was the Mecca to which all the best breeders in the Mississippi Valley turned to find heads for their herds.'

"These are some of the breeders who obtained herd headers at Linwood: William Warfield, of Kentucky; Martin Flynn, of Iowa; C. C. Norton, of Iowa; S. M. Lockridge and J. G. Robbins, of Indiana; Colonel Casey, of Missouri; N. H. Gentry, of Missouri; T. P. Babst, S. C. Hannah, and Andrew Pringle, of Kansas; C. E. Leonard and W. T. Clay, of Missouri; Kansas State Agricultural College, and many others.

"At the time Colonel Harris began breeding shorthorns, 1880, there was a fight on for popularity between the fashionable and more showy Bates cattle and the more meaty, compact and really profitable Scotch or Cruickshank sort. Sanders' Short Horn History, the highest authority known in the shorthorn world, says: 'The real leader of the Scotch forces in the United States was Colonel W. A. Harris, of Linwood. Few men possessing like strength of character have ever given their personal attention to the breeding of shorthorns. It was generally conceded that Linwood, at its best, was the outstanding herd of the United States, and foreign visitors question if it had a superior in Great Britain.' This was written in 1900.

"Ten years later, and after Colonel Harris had passed away, the same historian and editor says, 'Colonel

Harris was, in my judgment, the ablest man who has been identified with cattle breeding in the United States since my acquaintance with the industry began.'

"When advised by his party leaders in the spring of 1892 that they were going to nominate him for congressman at large, he answered if they did so, they would do it without his encouragement or coöperation. He immediately went abroad with his bosom friend, Alvin H. Sanders, of the *Breeders' Gazette*, and was inspecting English and Scotch herds of short-horn cattle when that nomination came to him."

LOWMAN'S MEN WON IT.

Fairmount College Played Gamely, but Lost to Aggies, 9 to 5.

The Aggies won from Fairmount College, last Saturday, 9 to 5, in a game that kept the spectators cheering and shouting throughout the 60 minutes of play. Fairmount scored first in the second quarter when an accurate place kick by Solter from the 30-yard line gave them three points. In the same quarter Phelps, the Aggie center, broke through the Fairmount line, blocked a kick, and recovered the ball three yards from Fairmount's goal. Two line plunges, the last by Loomis, put the ball over. Howenstein kicked the goal.

In the third period Howenstein dropped a pretty field goal from the 35-yard line. Fairmount was held for downs in the last quarter within a foot of the Aggies' goal line. Howenstein attempted to punt out of danger, but the ball was blocked and Sidorsky, who recovered it, downed behind the Aggies' goal. It was a safety and counted two points for Fairmount.

Fairmount was outplayed. The Aggies uncorked a little of the open field work in which they have shown rapid improvement. The Wheat Shockers attempted 15 forward passes, only three being completed. The one forward toss of the Aggies, Hehn to Stahl, netted 15 yards. The defense of the Aggies when forced back to their 6-yard line was an example of determined, stonewall playing.

WITH BULLETS OF LEAD.

Target Practice of the Real Kind the Latest by Lieut. Harbold.

Lieutenant Harbold is planning a schedule for next term that will be hard to beat. The cadets will get a mixture of shooting, setting-up exercises, aiming, and class work in the study of field maneuvers and the manual of arms. Much interest is being taken in military matters this fall, and Lieutenant Harbold is "whipping his team into shape" as truly as any football coach. All this preparation, of course, is for the inspection, next spring, by the inspector general of the army.

The winter term of drill, heretofore, has consisted of class work, or "tic-tacs" as the cadets term it, broken occasionally by a tramp over the wet campus. From now on the winter term of drill will be as interesting as the other terms, and possibly a little more so, for the boys are to have target practice of the real kind, probably in the big gymnasium. And one of these days a detail from the Kansas State Agricultural College armory will compete in the national shooting tournaments.

Work That Tells.

I would rather plant a single acorn that will make an oak of a century and a forest of a thousand years than sow a thousand morning glories that give joy for a day and are gone tomorrow. For the same reason I would rather plant one living truth in the heart of a child that will multiply through the ages, than scatter a thousand brilliant conceits before a great audience that will flash like sparks for an instant, and like sparks disappear forever.—Edward Lehigh Pell.

Read Chauncey's Speeches?

Eight volumes of the orations, addresses, and speeches of Chauncey M. Depew have been received by the library. Quite a number of important public documents have also been received from W. A. Calderhead.

THRESH IN THE STACK.

THAT'S THE BEST WAY TO HANDLE WHEAT FOR FLOUR PURPOSES.

Experiments Show This Method Develops Milling and Baking Qualities—The Sooner it's Stacked After Curing the Better.

Excellent fields of wheat often are practically ruined for flour-making purposes by improper methods of handling after harvest, according to L. A. Fitz, professor of the department of milling industry at the Kansas State Agricultural College.

Experiments conducted by Professor Fitz to compare the milling and baking qualities of shock-threshed and stack-threshed grain resulted in favor of that which was stack threshed.

The sooner wheat is stacked, after it is cured in the shock, the more it will be worth when it is put on the market, as far as grade is concerned.

HOW IT'S GRADED.

Wheat is graded almost wholly upon its quality, condition, and test weight. All of these are affected by exposure to the weather. The kernels lose the natural color when shocks are exposed to alternating rain and sun. This results in what millers term the bleached appearance, which has a marked effect upon the market value of the grain. Exposure of wheat to rain and sun will result in unsound flour on account of many of the kernels sprouting. This causes a chemical change which weakens the baking quality of the flour.

The test weight is also decreased by exposure. It has been proved conclusively that upon the absorption of moisture the test weight of wheat is decreased and, upon drying, the wheat never attains its original weight.

The "sweat" of wheat is a chemical change supposed to be the final process in ripening. It happens when wheat is brought together in a large bulk. It takes place in the stack when wheat is stacked, and in the bin when it is threshed from the shock. Millers and elevator men prefer wheat that has been through the sweat. They say it is better to have it go through the sweat in the stack than in the bin.

DON'T STACK DAMP.

There is always some heat evolved in the sweating process. Without the proper precautions this heat may cause "stack burned" or "bin burned" wheat. There is less danger of injury from heat in the case of stacked wheat because of a freer circulation of air. Furthermore, millers say that sweating in the stack improves the condition of weathered grain. Wheat should not be stacked in a damp condition, as the more the moisture content the greater the possibility of damage from heat.

There is no available data to prove the advantage or disadvantage, in the cost of labor, of either the shock-threshing or the stack-threshing method. It is the opinion of authorities, that if there is any extra cost in stacking it will be fully offset by the improvement of the grade and the consequent higher selling price under a given prevailing market price.

Another advantage in stacking wheat is that the ground usually is cleared earlier. This allows early plowing or disk ing, which is a decided advantage in preparing wheat ground.

GASOLINE IN TABLOIDS.

This, Presumably, is the Last Word in Motor Car Comforts.

Automobilists in England—they call them motorists over there—are much interested in the success of an invention known as "solid petrol," or gasoline in little bricks. Its exact composition is, of course, a secret. It contains 80 per cent of ordinary gasoline, a percentage of soapy matter, and one per cent of a foreign substance which gives it solidity. A small block of it is said to be equal to a gallon of liquid motive power, and its inventors say that enough to propel a car 1200 miles can be carried in a little box on the running board of the machine.

New York Tribune.

Men of Brains

Never get through studying books. If you are through

Going to School

let the

Kansas State Agricultural College

Come to You

Correspondence Courses:

Soils
Farm Crops
Stock Feeding
Poultry
Dairying
Butter Making
Orcharding

Drainage
Road Making
Concrete Work
Cooking
Sewing, and
Twelve others

Send for Correspondence Study Pamphlet. Let me have your wasted hours.

Director College Extension, Box G

Kansas State Agricultural College,
Manhattan, Kansas

FIGHT THOSE FIELD MICE.

A Diet of Poisoned Grain Does Not Agree With Them.

than one to three per cent of acetic acid and will not pass the pure-food law.

The only way you may know that your vinegar is up to the requirements of law—unless a chemical analysis be made—is to make it according to "the new way." Here it is:

The equipment is simple and inexpensive. To make the generator, take a clean barrel or cask and in the end to be used as the bottom place a spigot. Then place a perforated false bottom about three inches above the spigot and fill, loosely, the remaining portion of the barrel with beech wood shavings or twigs that have previously been impregnated with "mother of vinegar." Just above the false bottom make a number of small holes to admit air. Then put the head, which also is perforated with small holes, on the barrel. Allow the cider to trickle on the head of the barrel, where it will slowly pass through, coming out finally at the spigot. If

little is known about the breeding of these mice. They build nests on the ground of grasses lined with soft material. Young have been found in the nest as late as November. There may be as many as six in a litter.

They feed almost entirely on grain. Much damage is done in the winter to grain left standing in the field, in shocks, as the shocks afford both a home and a place to feed. In the spring and early summer they do considerable damage to planted grain. They will follow the rows of corn, dig out the kernels and eat the germ.

Poisoned grain dropped in the runways of moles and gophers will be eaten by the mice. Seed-corn soaked in strichnia sulphate for forty-eight hours will not injure the germ. The corn may be soaked and then dried and planted in the usual way. If a rain follows shortly after the planting, this may not prove successful.

Progressive Idea.

A certain portion of wall space in the hallway of a house where every member of the family passed by many times a day was reserved for changes of decoration. There were hung a map of the United States, a poster of some new public building, an inexpensive print of some famous painting, a poster of special interest, etc. This proved to be a never-ending source of interest throughout the year.—*Ladies Home Journal*.

To Keep Furs.

To store furs safely from the ravages of moths, sprinkle the furs well with pepper and then wrap them in newspapers, and paste the newspapers all around securely on all sides.—*Louisville Herald*.

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THE SOUTH NEEDS COOKS

WEST VIRGINIA WOULD LIKE TO REPEAT MISS FORCEMAN'S LECTURES.

A Letter Received from George A. Laughlin, of Wheeling, Telling of this Young Woman's Successful Work Last Winter.

Down in West Virginia, where the sweet potatoes grow—and corn and tobacco and goodness knows what else—a call was issued, last winter, for a woman who knew what was what in common-sense cookery. Naturally the summons was sent first to the Kansas Agricultural College by its originator, George A. Laughlin, of Wheeling. Now Mr. Laughlin is not only a very devout Presbyterian, with loads of wealth piled away for emergencies—can you imagine a better combination?—but he is also a large-size Christian gentleman with a fine, human interest in men and women whose worldly positions are not so pleasant as his own.

HERE'S THE VERY NOTE.

All of which explains by implication, at least, how it fell out that Mr. Laughlin wrote to Miss Frances L. Brown, in charge of domestic science work for the extension department of the college, offering to pay her expenses for a month if she would go to West Virginia and give a series of lectures on cookery—a movable cooking school, like those organized by Miss Brown in Kansas. Miss Brown couldn't go. She was too busy. Kansas needed her, but she suggested a competent substitute. Miss Minnie Forceman stayed down there about a month, talked and cooked and cooked and talked, and made a lot of friends; so many, indeed, that what does George A. Laughlin, the wealthy person, do but write a letter about it addressed to THE KANSAS INDUSTRIALIST. And here's the very note, and this is what he wrote:

To The Kansas Industrialist:

I want to say something about the little cooking school we maintained in Wheeling for a period of about three weeks last winter. This school was made possible through the kind interest taken in the project by Miss Brown, of your college, and her assistant, Miss Forceman, who visited Wheeling and personally took charge of the work. It was an unqualified success, accomplished a great deal of good, and, if we can find some local person capable of taking charge, Mrs. Laughlin and her associates contemplate repeating it this winter.

AND IT COST ONLY \$600.

The approximate cost of the entire work, including Miss Forceman's expenses, salary, equipment and supplies, amounted to about \$600, which cost, however, was free of rent, as the room was furnished. As I said before, the school was in operation about three weeks, every day of the week (excepting, of course, Sunday), with a new class receiving instruction each week; and consisted of afternoon and evening classes. The evening class was made up of young girls, employed during the day; was fully attended at each session, and the class could have been larger had facilities permitted. The evening class was for older women—mothers—and the attendance averaged possibly 60 per cent. It was difficult for those women with families to give it the necessary time. As I recall it, a class was made up of 24 pupils, which was the full number that could be accommodated to the extent of the equipment.

The ladies of this state are quite interested in the idea of establishing a travelling cooking school in West Virginia similar to the one you have in Kansas. Besides the ladies, we have a number of influential men in the state who are backing the project,

and at the next session of our legislature we hope to secure an appropriation which will permit of its continued maintenance. To this end, will you kindly advise me the amount of the annual contribution of the state of Kansas for the support of your travelling cooking school? Also, whether or not this amount is sufficient for the requirements, and to what extent, if any, is the school self-sustaining?

As I before said, we want to lay the matter before our next legislature, which meets the winter of 1912-'13, and I will be very grateful to you for what data you can give us as to your work in Kansas.

Thanking you for any help you can give us towards this end, and in the hopes that we may in some way be enabled to emulate the commendable and intelligent energy Kansas is displaying along these lines, as well as many others, believe me,

GEO. A. LAUGHLIN.

BETTER MILK FOR BABY.

That's the Platform of D. S. Burch, New Dairy Commissioner.

There's a new dairy commissioner in Kansas. D. S. Burch is his name. Ordinarily this intelligence might not stir up any especial ripples, but just now it is interesting in view of his determination to get after the dairies where the milk "tastes queer." Notice it lately? Gives the impression of someone having dropped a lot of sardines or old weeds into the pitcher. Someone, the dealer on the corner, probably, will tell you it's the silage the man fed his cows. Don't you believe it, good people. It's formaldehyde and poor water and a lot of other things that don't belong in any self-respecting milk. Send a sample of it, tightly corked and sealed, to Commissioner Burch, and the chances are you'll change milkmen. If you don't take these precautions there's likely to be a piece in the paper about some of your children—most likely the baby.

You must have a permit in Kansas, signed by the dairy commissioner, before you may test milk or cream or any dairy output. And you must keep that permit posted where it may be seen. This permit lasts three years. It is issued only after an examination by the commissioner. It may be revoked at any time.

About 3000 permits have been granted in Kansas. An average of four or five applications for examination are received every day.

"The greatest dairy development," says Mr. Burch, "is in the western part of the state, where the conditions are ideal. It is nearly always true that where the wheat crop fails the dairy business develops."

Mr. Burch succeeded D. M. Wilson July 1, 1911. Mr. Burch is a graduate of the University of Wisconsin and the college of agriculture and journalism of Wisconsin. His first official work was with the United States department of agriculture, in the dairy division of animal industry. This included work in Washington, D. C., and inspector in South Dakota, Michigan, and Virginia, in gathering information and affidavits to be used at the hearing of the Interstate Commerce Commission, to establish equitable express rates for the shipment of cream.

After resigning from this office he accepted a position as editor of the *Butter, Cheese and Egg Journal* of Milwaukee, which he held until February, 1911, when he went to Springfield, Ohio, as assistant editor of the national farm paper, *Farm and Fireside*. At the end of June he resigned this position to accept the place of state dairy commissioner of Kansas.

Always spread corn-meal out on paper to dry thoroughly before putting it away.

IT COSTS YOU \$14 AN ACRE

CORN FODDER IS WORTH THAT AS A FEED FOR COWS.

Shredded and Mixed with Alfalfa or Bran, Corn Stover Makes a Feed that is Easily Digested and Heat-Producing.

You may be losing \$14 an acre on your corn land every year. If your corn makes 30 bushels to the acre and you don't use the feed in the stalks, that is just about the amount of your loss. To be sure, you can't sell your stalks for more than \$1 an acre and often have to take considerably less, but if the crop is handled properly you might just as well have that \$14 an acre to buy a motor-car or a new dress for your wife.

WHEN TO CUT CORN.

Experts at the Kansas Agricultural College agree that fully one-half the feeding value of the corn plant is in the stover; that is, the plant after the ears have been removed. The corn should be cut when about half of the leaves are dry. After standing in shocks a while to cure, the ears should be husked and the stover put back in shocks until thoroughly dry. When dry it should be housed or stacked in conical stacks before stormy weather begins. Stover should not be fed alone, as it is a heat-producing rather than a flesh-forming food. Cut or shredded stover, steamed or moistened with water and mixed with grain or bran, is very palatable to live stock.

The stover itself should never constitute more than one third of the daily ration. Unshredded stover makes the animals' mouths sore and they quickly tire of it when it is fed alone. In composition it is practically identical with timothy hay and is as easily digested. That it is a cheaper feed is shown by the fact that an acre of ground will produce as much digestible ingredients in corn stover, in addition to the grain, as an acre of timothy. But when used alone and fed whole, fully one-third of its value is lost. Shredding will increase the proportion eaten. Only enough to last a week's time should be shredded, as a larger quantity is liable to spoil.

COWS LIKE STOVER.

There is another advantage in the use of stover. Cattle are not needlessly exposed to the chilling winter winds in feeding. Cows relish it. It is an ideal feed for them if some legume, as alfalfa, is used with it. The legume rotated with fodder corn also will restore the nitrogen and mineral matter to the soil, and the stover itself has a considerable manurial value, which becomes quickly available if the stover is eaten. Stover is a good forage for horses.

A VISITOR FROM INDIA.

S. V. Kadam, of Sheopur, Gathered Information Here Last Week.

S. V. Kadam, of Sheopur, Gwalior State, India, was at the college last Saturday. He is in the United States in the interests of the Indian government. He was in Canada and from there went to Colorado Springs to attend the Dry Farming Congress. He is especially interested in the use of farm machinery, as one of the problems in the agricultural life of England is to care for the large tracts of land. Mr. Kadam left here for Lincoln, Neb., to visit the university at that place.

GET YOUR WELL RIGHT.

Higher Ground and at Least 100 Feet from Possible Pollution.

No well should be located where polluting matter has access to it. Such matter usually comes from cesspools or privies, slops thrown on the surface, backings from hen yards, pig-

pens, and barnyards, from manured fields, animals falling into the water, and filth thrown in through the open top or washed in through the plank coverings or leaky casings. The matter entering through the top can be kept out by cement, iron, or other impervious curbing. The entrance of material at the bottom of shallow wells can be prevented only by locating them beyond the reach of contamination. Where any of the polluting agents are present care should be taken to see that the well is located at least 100 feet away and on distinctly higher ground, so that both the surface drainage and the underground drainage—which generally moves in the same direction—will be away from it. On flat lands the wells should be at least 150 feet from any source of pollution. The importance of choosing a location safe from polluting influences is almost universally underestimated.

Laying aside considerations of comfort and health, a safe well is nearly always, in the long run, the cheapest. Safety should invariably be made the first consideration instead of the last. (From Water Supply Paper 223, U.S. Geological Survey.)

FOR CORN—\$9.02 AN ACRE.

At That Rate, Are You Making a Profit or Losing?

Ever stop to consider the actual cost of producing an acre of corn? Here are some results found by using figures from Secretary Coburn's compilations:

The price of corn land was estimated at \$61.25, an average of 20 counties at various parts of the state being taken. Interest at 8 per cent on this would be \$4.90. About one third of the land is plowed and two thirds listed every year, while more than one half is usually disked before either plowing or listing. Cost of listing, 44 cents, of plowing, 45 cents, and diskling one-half an acre, 9 cents. The total cost of preparing the ground is 98 cents an acre. The cost of planting and cultivating is \$1.43 an acre. The seed would cost at least 20 cents. The husking of the crop at 5 cents a bushel, the average based on a state report being 21.6 bushels, would cost \$1.08. Taxes on the land at .007 mills would be 42 cents. The total cost to produce one acre of corn would be \$9.02. The average cost of producing a bushel is 43 cents.

HERE'S A VERSATILE WRITER.

Dr. A. Emch, '94, Writes Three Stories in as Many Languages.

It is not often that an American author publishes three different articles in three countries and in three languages at the same time. Dr. A. Emch, who received his M. S. degree here in '94, has just done this. Doctor Emch is now with the University of Illinois.

The November number of *Popular Science Monthly* contains an article on "Mathematics and Engineering," by Doctor Emch; another article, "Solution of an Important Problem in Hydraulics," appears in the "Archiv für Mathematik und Physik," published in Berlin, Germany, and still another, "A New Apparatus Transforming Potential into Kinetic Energy," has just appeared in "L'Enseignement Mathématique," published in Paris.

Does Silage Affect the Flavor?

Have you noticed anything different in the flavor of the milk since you began feeding silage? If there is any change at all the flavor will be a little more pleasant, says O. E. Reed, head of the dairy department at the Kansas State Agricultural College. But if the silage is allowed to ferment too long and then fed, the milk will have a taint much like that noticed when weeds are eaten in the summer.

PUT UP YOUR OWN ICE.

A SMALL CEMENT HOUSE MAKES GOOD STORAGE ROOM.

You Won't Need to Hang the Milk and Butter in the Well Then—Get Ice from a Near-by Stream—Save Your Money.

Start the next summer right by having your own ice. Unless you do, you will have to pay ice bills, or, if you can't get ice, hang the milk and butter in the well—both of which are unhappy chores.

Put up your own ice. A small cement house, cheaply made, is just the thing in which to store it. This house will last longer and keep the ice better than a frame building of the same construction, says G. M. Pratt, architect with the Kansas State Agricultural College.

Either blocks or cement poured in large moulds can be used. The mixture should be rich enough that the walls will not be porous. Two thin walls reinforced with rods protected from rust and separated by a three-inch air space gives the best combination. If blocks are used, large cores will save material and keep the temperature more even.

For an average family a building 10 x 20 feet and 15 feet high is a good size. It does not store more than two families can use. Ice keeps better when stored in such quantities, says Mr. Pratt.

Such a building could be built for \$250. A neighborhood could build one a little larger that would do for all and the individual expense would be lessened.

The ice house may be filled from near-by streams as soon as they have frozen to a good thickness.

COUNTRY'S EDUCATORS TO MEET.

At the Sessions in Columbus, November 15, President Waters Will Speak.

The Association of American Agricultural Colleges and Experiment Stations has its twenty-fifth annual session at Columbus, Ohio, November 15. H. J. Waters, president of the Kansas State Agricultural College, is on the program. He will discuss: "Ideals for Intercollegiate Athletics and Means of Attaining Them." He will speak on experiment station work, also. J. H. Miller, director of the extension department, will tell of "The Special Train as a Means of Extension Training."

In the sessions of the agronomy department of the convention President Waters will speak on, "The Feeding Experiment; Its Improvement and Refinement." Director Miller is a vice-president of the association. President Waters is a member of the committee on instruction in agriculture.

The association is composed of the men who are prominent in agricultural college and experiment station work. The meeting will be attended by many of the country's greatest educators. P. P. Claxton, United States commissioner of education, will be a speaker.

An Address by W. O. Pennell.

W. O. Pennell, chief engineer for the Missouri and Kansas Telephone Company of Kansas City, lectured to the members of the college branch of the American Institute of Electrical Engineers, Tuesday night, November 7. His address was illustrated with 135 slides. The subject was "Telephone Engineering with Respect to Switch-Board Building and Line Design."

Brass Polish.

Neglected brass may be polished with a paste of powdered bath brick and oil. Take two pieces of the brick and rub together. This makes a finer powder than if scraped with a knife.

THE KANSAS INDUSTRIALIST

Established 1875.

Issued weekly during the college year by the Kansas State Agricultural College, Manhattan, Kansas.

PRES. H. J. WATERS Editor-in-chief
PROF. C. J. DILLON Managing Editor
DR. J. D. WALTERS Local Editor

Except for contributions from officers of the college or members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism, under the direction of Prof. Charles Dillon.

The typesetting and other mechanical work is by students in the school of printing, of which J. D. Rickman is superintendent. Both these departments are in Kedzie Hall.

Newspapers and other publications are invited to use the contents of the paper freely without credit.

The increasing demand for THE KANSAS INDUSTRIALIST makes it necessary to insist upon the payment of the regular subscription price, 50 cents a year, invariably in advance. No commission is paid any one for subscriptions, and no advertisements are accepted. The paper is sent free only to the alumni, to officers of the state, and members of the legislature. This rule will not be violated.

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SATURDAY, NOVEMBER 11, 1911.

AGRICULTURE IS LEADING.

The evident determination of President Waters to encourage every form of educational activity in the instructional body has been noted with much pleasure by those most concerned. There never was any good reason for the agricultural college remaining out of the state teachers' deliberations, for instance. Almost every table or meeting of the association has to do with subjects upon which the representatives of the college are particularly well equipped to speak. The long and exceedingly interesting program of that association, for the meetings which ended yesterday, contained many such subjects.

Where, for instance, could one find better material for studying vocational training than here, in the agricultural college, where it is taught. It was to give vocational training that the government founded the agricultural colleges of the country. And now, with the rural grade and high schools studying elementary agriculture, and domestic science, where are there teachers better equipped to talk of these things than those in the college?

But the mission of the agricultural college is much larger than even these departments indicate. Where approximately 2500 young men and young women pursue their studies the catalogue must indeed be comprehensive. It must seek to fit students for immediate service and send them forth as nearly ready as it is possible to do, to give that service. Moreover, it must have a big influence in character building, in making strong citizens, morally and intellectually—educated, in short, for the common-sense, practicable things of 1911.

That is what the Kansas Agricultural College is doing, under the guidance of its energetic president and its live and active faculty. Its influence will grow, too, as the trees have grown on its beautiful campus. In 1885 there was not a tree on that stretch of green. You can scarcely see the buildings, now, from the main gateway.

In 1885 the college had 428 students. In 1910 it had 2410 students. It has more short-course students now than were in the entire enrolment twenty-five years ago. You know, Mr. Farmer and Mrs. Farmer, too, what that means.

It means that agriculture and the industries allied with it are leading the world.

CLUBS IN THE COUNTRY.

Every neighborhood should have well-organized women's and girls' clubs. How much more beneficial clubs would be in the country, where the neighbors rarely see one another, than in the city.

The country woman of to-day has so economized in her housework, or should have, at least, that she may have many of her afternoons off to do as she pleases—if she is wise. With the use of a horse occasionally, she could go quite a distance, if necessary, to attend the meetings.

The club could meet every two weeks, or oftener, and discuss prob-

lems of housewives, have papers on current events, discuss new books; and if they meet in homes, light refreshments could be served at little cost. This would bring the neighbors closer together. They would take a personal interest in one another.

Do not stop with a women's club; have a girls' club, too. The girls would enjoy it. It is that feeling of isolation that causes boys and girls to leave the farms. Girls may have embroidery clubs, where they could exchange ideas about fancy work, or domestic science clubs, where they could try new recipes, with a little music and literature, too.

A literary club that would keep the girls interested in new books is one in which every member agrees to buy a late book and at every meeting exchange her book for one she has not read. The program might consist, also, of a study of some of the authors, or anything pertaining to literature.

Whenever country folk catch the idea that young people must have pleasures, that they must have associates, as the city boys and girls have, and will provide ways and means for them to have these pleasures, they—the parents—will no longer have to think of the question, "How can we keep the boys and girls at home?"

L. C.

The ideal condition in the mind of the writer of the foregoing editorial is to be realized, this winter. Neighborhood improvement clubs are being organized everywhere in Kansas by the agents of the Kansas Agricultural College. These clubs will, it is believed, revive many of the old-time, much-loved activities that once were characteristic of rural communities.

No other project of the college has been accorded a welcome so hearty and sincere.

WHY DON'T THEY ADVERTISE?

Not more than one-third of the rural public sales are properly advertised. Did you ever calculate the amount of money lost every year by the owners failing to carry on an extensive advertising campaign for their sales? A few dollars more spent for newspaper space would give large returns.

The average publicity effort made by the average man eager to sell out is weak. He has a few sale bills printed, and he runs the same copy in the local paper. That ends the campaign. That is poor management. The more extended the publicity the larger will be the crowd—and the prices usually vary with the size of the crowd. A farmer, especially a live stock man, would drive 20 miles to attend a sale where stock that he needed was to be sold. Hence it is obvious that extended newspaper advertising is important. Never spend less than \$20 in newspaper space, and if the sale is a large one it will pay to spend a larger amount.

If you are a specialist, and handle some special line, such as fine hogs or cattle, newspaper advertising is absolutely necessary to success. And don't make the mistake of advertising only when you have something for sale. If you handle Duroc-Jersey hogs, and have no hogs for sale now but will have in the spring, put a card in your paper and tell the people about it. If you don't, they will look up the hog breeders in the classified columns of their farm paper and send off to the man in the other end of the state who believes in publicity. If you have something to sell, don't let the people forget. It won't pay.

Newspaper advertising, when figured on the basis of the number of persons you can reach and the results you can get, is cheap. Money spent in this line will bring greater results than any other form of advertising.

And this paper takes no advertising.

F. B. N.

THE INJURING OF "TAFT."

No doubt it is all very fine and stylish to own a motor car and go cavorting about the country at break-neck speed, but there is—or should be—a limit. When a motorist slays, wantonly and, apparently, with much glee, the chickens of the citizens, then

A Golden Text.

For a day in thy courts is better than a thousand. I had rather be a doorkeeper in the house of my God, than to dwell in the tents of wickedness.—*Psalms 84:10.*

—in the words of the Clay County *Republican*—"it is time to call a halt."

There was "Taft," for instance. Not the President—merely, no—but "Taft," a neighbor's rooster, as proud a bird as ever stirred the morn and caused the drowsy eyes of weary men to open wide, and hands to clutch in wrath. Scientifically, as we all know, "Taft" had no right to live. He was an excrescence. He was a nuisance. But as a neighborhood fixture, a thing of beauty, if not a joy forever, he was worth saving, he was worthy a better finish.

"Taft" was strutting down the roadway when the motor car came along, Wednesday. A rabbit could hardly have moved with more swiftness, but the car was quicker, and before sympathizing spectators could do a thing to help him, "Taft" was in a worse mix-up with the underworks of that car than his famous prototype has long been on the tariff. It was all over in a few minutes. When "Taft" headed west, after the wreck,

his comb had a list to the north. His feathers were badly ruffled and oiled, and his off spur was twisted around to the rear and upward, so that every time he stepped he stabbed himself, and seemed to suspect some of the spectators of doing it. No arrests have been made.

A Whittier Gem.

The autumn time has come;
On woods that dream of bloom,
And over purpling vines
The low sun fainter shines.

The aster flower is failing,
The hazel's gold is paling;
Yet overhead more near
The eternal stars appear.

—Whittier.

WAGES FOR THE WIVES.

It is proposed in England that wives shall have wages for their work. Why not? If a man is so stingy that he makes his wife ask for every cent she spends, then the law should compel him to pay her a stated wage, as England may do at no distant day. It will prove to be the only way in which many a wife will ever have a dollar, or tuppence, or whatever it is they give them over there.

Of course if the husband chance to be a gentleman—and this does happen more frequently than you may suspect—he will give his wife an allowance every month or every week, or whenever he gets his stipendiary emoluments. He will put this allowance in the bank in her name, and she will have her own cute little check book, and it will forever and ever be filled with stubs. Red ink will be always seen in her bank book, because she'll spend her money as fast as she gets it, and 98 per cent of it will go for things for the house and the children and the husband. And he will growl like a sick bear if, in an emergency, she should ask for an extra ten dollars or a guinea. The proposed law should take care of this contingency, too.

It should arrange a method by which the husband would be led to the basement and kept there thirty minutes while the children threw coal at him. By all means pay the wives wages—in England.

WONDERS OF MACHINERY.

A modern farmer now does three and one-half times as much work in twelve hours as did the farmer in the days of William III, and he does not work so hard or so long. This is due to improved machinery.

When the first census was taken a rural family produced only one-fourth enough to keep another unproducing family. In other words, it took four families on the farm to grow food for one, in town. As a result, the cities were small and towns scattered.

Under the reign of the silo, the threshing machine, the gang plow, and the gasoline engine, one pair of hands can produce food for many mouths and thus the complex commercial system has developed in direct proportion to the advance of agricultural machinery.

From the crooked stick to the modern "20 shovel," the threshing floor to the separator, the tallow dip to the private electric light system, from the sweating slave to the popping gas engine, the ox team to the motor car, seems a far cry, but it was all made possible by brains.

Prejudice against book farming is rapidly dying. Country life is growing still more worth while. Machinery has given the farmer time to read, study, and think. Means of communication have been improved and he can meet with his fellows, compare results, and make still more gains. He lives in a home with modern conveniences and the news of the world at his door daily.

E. A. V.

TWENTY-FIVE YEARS AGO.

A Few Items Taken from the Columns of The Industrialist of '86.

Thursday evening a supper was given to the members of the Academy of Science by the faculty and those of the society who live in Manhattan. It was prepared by Mrs. Kedzie and her girls, and was pronounced first class by all who tasted the good things set before them. The tables were ornamented with beautiful flowers; and some of Mr. Baxter's greenhouse plants lent their beauty to the occasion. The after-supper speeches were spicy and well received. President Fairchild, Professors Snow, Dinsmore, Lovewell, Bailey, Cragin, Hay, Dr. Brown and Mr. Savage responded to the master of ceremonies, Professor Nichols, who presided with grace and dignity. Mr. Dyche's bear (?) story "brought down the house." This was a happy close to one of the most successful meetings ever held in the state.

Proofs of two large photographic views of the college, fourteen inches by seventeen, were received from Messrs. Leonard and Martin, of Topeka, on Thursday. One gives the grounds as seen from the top of Professor Fairly's house, and another is a near view of the college building. Both are good—that of the one building especially so. Any one who would like to secure copies may do so, at a very reasonable price, by giving their names to the president or the secretary.

A Young Men's Christian Association was organized at the college on Friday night, with D. G. Robertson as president; L. B. Parker, vice-president; C. A. Murphy, recording secretary; G. W. Norris, corresponding secretary; G. W. Waters, treasurer. The meetings will be held at the college at 4 p. m. Sundays.

Professor Nichols' lecture upon the magic lantern as a means of illustration in teaching the sciences was given Wednesday evening before a chapel full of people. Even the children brought appreciative eyes and ears to the clear pictures and even clearer explanations of the professor.

The fourth annual meeting of the Kansas State Shorthorn Breeders' Association will be held in Topeka, Kan., December 8, the first session to begin on the evening of that date. Programs will be issued in due time. A full attendance of the breeders of shorthorns is hoped for.

The grandmotherly interest of the college is aroused, even at this late date, to chronicle the birth, a month since, of a boy to J. J. and Alice Stewart Points. The classes of '89 and of '95 will recognize especial relationship to the new freshman.

Home Helps.

To keep tins from rusting, it is a good plan to place them near the fire after they have been washed and dried.

In making sauces use clarified fat from the soup kettle as the medium for cooking the flour, then beat in a few tiny bits of butter to the finished sauce for the flavor.—*Racine Journal.*

The Collegian.

College seals upon his letters,
College pennants on his wall,
College letters on his sweaters,
College clothes and shoes, and all;
College slang he's fond of slingin',
With no end of savoir-faire,
College songs he's always singin',
"College cut" he wears his hair!

Oh, he tells of college capers
And he has a college walk,
And he reads the college papers,
And he talks the college talk,
Sports a college belt and buckles,
Wears a college fob and chain,
Laughs with quite a college chuckle,
Swears in quite a college strain.

Then he dances college fashion
And he eats at College Inns,
And he has a perfect passion
For displaying college pins,
And you'd never in creation
Guess this student—calm and cool—
Got his college education!
In a correspondence school!
—Berton Braley, in *The Beacon*.

SUNFLOWERS.

Christy Mathewson's "fadeaway" seems to have faded, all right.

Hutchinson is like Kansas City in another thing: It "does not intend to mince matters with the gas company."

Why was November 30 chosen for Thanksgiving? To take one day off the already abbreviated quail season?

One thing is certain: No man of sense would move, now, from Hutchinson to Kansas City. Both are out of gas.

We lost a bet, this week, on which would start first: the McNamara trial, the Hyde trial, or the Vermilyea hearing.

The *Beacon* is now urging that one day be set apart for the city to clean up. We now move to amend to read, "Watch Wichita Wash."

The Chicago *Record-Herald* says it has found it necessary to open offices "in the persons of Frank L. Dean & Co." Is this an inside story?

Prexy Taft gave a college student \$100, a few days ago, in Chicago. Isn't he the wise one? Now, all together, yip—yip—scholar—ship.

By all means let us have a sane Thanksgiving. If there must be a turkey have it large and fat and brown—and, please have it at our house.

We draw attention, modestly, to the fact that we have resisted every temptation to publish, this fall, Riley's "When the Frost is on the Pumpkin."

The state auditor reports that Kansas has spent \$6,490,581.50 in the last year for improvements. If that 50 cents was for a bath it will not be allowed.

Algernon.—No, Algry, the game law says nothing about shooting ducks from an aeroplane, but it is wrong to hunt prairie dogs when the ground is frozen.

Miss Maude Muller, we learn from the esteemed Chattanooga *Times*, is to visit friends in that city this winter. We trust Maude has the hay in the barn, properly.

Surprise is expressed in a headline in *The Star* in telling of the suicide of a man who had twenty-seven children. And he had been married twice. What can you expect?

Some men acquire wonderful expertise with a shot gun. Only last week a man in Minnesota shot a lawyer, mistaking him for a duck. And before the lawyer could object, too.

One hundred and fifty persons were killed, last year, in hunting accidents, says a dispatch from Washington. Why didn't they hunt rabbits, or, better still, move to Kansas?

H. Clifford Woodhouse was too busy to go to Chicago to marry a girl with a million dollars in her little satchel. That's what you'd expect from a man who parts his name in the middle—and Clifford, too!

A few minutes after R. H. Faxon left the agricultural college, one morning last week, a special delivery letter came for him. It was postmarked Topeka. Could it have been?—But why pry into personal matters?

Not satisfied with letting Dyche make the sportsman's life a burden, some busybodies are now organizing an association to "Save the Quail." Soon we shall have a Quail Congress. Have the farmers forgotten that rabbits eat cabbages? Anything that'll keep cabbage from human beings is entitled to protection.

LOCAL NOTES.

E. L. Edwards, a student here several years ago, was a college visitor Tuesday.

A telephone booth has been installed in the main hall for the convenience of students.

C. A. Scott, state forester, was in the western part of the state this week gathering material for his bulletin, "Trees for Western Kansas."

J. V. Cortelyou, professor of German, is teaching a class in Old English. This is the first time the course has been offered here. The class is composed of members of the board of instruction.

Mason Haskell, a former student, was in Manhattan Saturday and Sunday. He is now in the commission business in Kansas City. His father was, for a number of years, warden of the Kansas State Penitentiary.

ALUMNI NOTES.

Georgia Randels, '10, is visiting her sister in college.

W. L. Blizzard, '10, is now employed in the animal husbandry department.

George W. Fryhofer, '95, visited the college last Saturday. He is a brother of Mrs. E. H. Webster.

Mr. and Mrs. Clyde McKee, '10, are visiting in the city. Mrs. McKee was Clara Shofe, '10. Their home is in Akron, Colo.

Miss Edith Justin, '08, who is teaching domestic science and art in the county high school at Clay Center, visited relatives and friends here Sunday.

Miss Ruth Cooley, '06, left Manhattan, November 5, for Ventura, Cal., where she has a position as stenographer and bookkeeper in a newspaper office.

H. W. Wilkison, '11, visited college a few days this week. He will leave for Tennessee soon, where he will be secretary in the offices of a large power plant.

Francis Williams, '09, and Miss Hanna Ingvaldson, of Etiwanda, Cal., were married November 4. Mr. Williams is manager of the Los Macitos fruit ranch at San Dimas, Cal.

T. E. Clarke, '10, who is managing R. A. Stewart's herd of shorthorns in Reno county, had a successful sale November 1. The top price received was \$175 and the lot sold averaged \$74.

Charles Willard, '08, and Vivien Ullmer were married in Chicago, October 28. The bridegroom is a son of Dr. J. T. Willard, dean of science. Mr. and Mrs. Willard have gone to their home near Crawford, in Waubunsee county.

MUCH LIME IS USED.

Building Operations Take More than One Half the Total Production.

A little more than half the lime manufactured in the United States is used as structural material—in lime mortars, Portland cement mortars, concrete, gypsum plasters, and whitewash. Large quantities are also used in the manufacture of chemicals, in clarifying many products, in the milling and paper industries, in sanitation, in the smelting and tinning industries, in sugar-beet manufacture, etc.

The total production of lime in 1910, according to figures compiled by Ernest F. Burchard and just given out by the United States Geological Survey, was 3,409,416 short tons, valued at \$13,809,290, a slight decrease in both tonnage and value as compared with the figures for 1909. The average price per ton in 1910 was \$3.98.

SMALL KITCHEN, FEWER STEPS.

From Cabinet to Sink is Not a Journey in a Little Room.

An up-to-date, economical housewife prefers a small kitchen to a large one for several reasons.

A small kitchen is much easier to keep in order. It is a common saying among housekeepers that the more

room you have, the more you will find to put in it, making it drudgery to keep it in order.

A small kitchen saves much unnecessary walking during the several hours the housewife spends in doing her work, and she will save many steps by having all her work near her. Much hard labor is saved in keeping the floors clean. The housewife that keeps a sanitary kitchen mops the floor every day. Think how much work is saved in one year by having a small floor.

The small kitchen can be made to look more "homey," a thing that is impossible to do in a large kitchen. Only a few furnishings are necessary and appropriate for a kitchen to make it attractive.

The day of large kitchens is past. They were used when the kitchen, dining-room and pantry was all one room; when the kitchen cabinet was unheard of, and sinks were few. Now, with the sink and cabinet in most homes, there

NO WORRY WITH DUCKS.

THESE FOWLS ARE HARDY AND CAN BE RAISED WITH LITTLE WATER.

They Will Not Drown; Are Not Susceptible to Disease, and They Require Little Feed—What More Could You Ask?

Good ducks mean good dollars. They are one of the most profitable species of birds a farmer can keep. There is much less worry in duck raising than in any other branch of poultry keeping. Ducks are hardy birds, good fatteners, and suffer little from vermin or diseases. With a moderate amount of feed and a little attention they will become profitable investments, and a source of much sweet eating.

While ducks are waterfowls and do not require roosting perches, they must have a comfortable, dry house. The duck house should be built on high

geese. And try to provide roomy quarters, for ducks need much exercise. They are great wanderers. They lose weight if confined long in one place.

Grass is a food of which they are very fond. In the summer let the ducks have a small "run" in alfalfa or rape. During the winter provide some green relish and, if possible, add it to a mash. Do not feed a ration of whole grain. The ducks will not do so well as upon a feed of ground grain mixed with cooked vegetables. Chopped or cracked corn is a good feed to use occasionally, but soak it thoroughly for several hours before feeding. Do not use poor, shriveled or musty grain.

PLENTY OF SAND.

Ducks cannot digest hard grain so readily as other fowls because they do not eat so much sharp grit. They prefer sand or coal cinders. There is not much danger of overtaxing a

HOW TO FEED THE PIGS

FULL RATIONS ARE BEST IN A DRY LOT, SAYS PROF. FLINT.

The Animal Husbandry Department Has Been Experimenting to Determine the Cost of 100 Pounds Gain with Growing Pigs.

Growing pigs kept in a dry lot should be fed on full feed. This increases the average daily gain of the pigs and generally lessens the cost of 100 pounds gain. As a low cost of production increases the profits from the hog sales, the hog raiser, to be successful, must aim to obtain this.

To determine whether limited or full feed is better, and also to find the best rations, the animal husbandry department of the Kansas State Agricultural College is conducting an experiment with growing pigs. Ten lots of nine pigs each are being used for this experiment. It was started July 20 when the pigs were four months old. And when this data was obtained—September 2—the test had run 45 days. The average weight July 20 and September 2 are here given, as is the daily gain and the cost of 100 pounds gain:

Lot No.	KIND OF FEED.	Cost of grain per 100 lbs. gain.		
		Avg. daily gain, lbs.	Avg. weight, Sept. 2, lbs.	Avg. weight, July 20, lbs.
1	One-half full feed of corn, alfalfa pasture.	49.1	65.9	.37 \$2.20
2	Full feed of corn, alfalfa pasture.	49.8	75.6	.58 3.36
3	Full feed of corn, dry lot.	49.2	61.9	.28 6.29
4	Alfalfa pasture alone.	49.1	55.3	.14
5	One-third full feed composed of this ration: Corn, 62%; shorts, 32%; tankage, 8%. Dry lot.	51.7	59.6	.12 6.39
6	Full feed of ration composed of corn, 62%; shorts, 30%; and tankage, 8%. Dry lot.	46.9	82.6	.79 3.98
7	One-third full feed of ration composed of corn, 62%; shorts, 30%; tankage, 8%. Alfalfa pasture.	49.0	77.8	.64 1.71
8	Full feed of No. 7.	50.1	108.1	1.29 2.67
9	Full feed of corn, fresh alfalfa in dry lot.	49.1	71.7	.50 3.33
10	Rape pasture with No. 6.	49.4	100.0	1.12 3.08

As to putting growing pigs on a full feed of corn and alfalfa pasture as in lot 2, or on a full feed of corn and fresh alfalfa in dry lot as in lot 9, the average daily gain is a little in favor of lot 2, but the cost is practically the same. But when put on full feed of corn without alfalfa as in lot 3, or on alfalfa pasture alone as in lot 4, the average daily gains drop to .28 pounds and .14 pounds, respectively. And the cost of the corn ration alone is nearly \$3 higher than where alfalfa is combined with it.

In lot 10 rape pasture was used instead of alfalfa, and the average daily gain was reduced .15 pounds and the cost increased 41 cents. However, this speaks well for rape pasture, this having produced the second best average for the 45 days.

From the data thus far obtained it is hardly possible to say that limited feeding on pasture is more profitable than full feeding. It does indicate that full feed in dry lot is more profitable than a one-third full feed. Alfalfa is found to be cheap, but it is too bulky and coarse to be used as a sole feed for pigs. Corn alone does not contain the necessary ratio between the protein and the carbohydrates and fats. Growing pigs need protein and should be fed alfalfa or other protein feeds along with corn, which contains the necessary carbohydrates and fats.

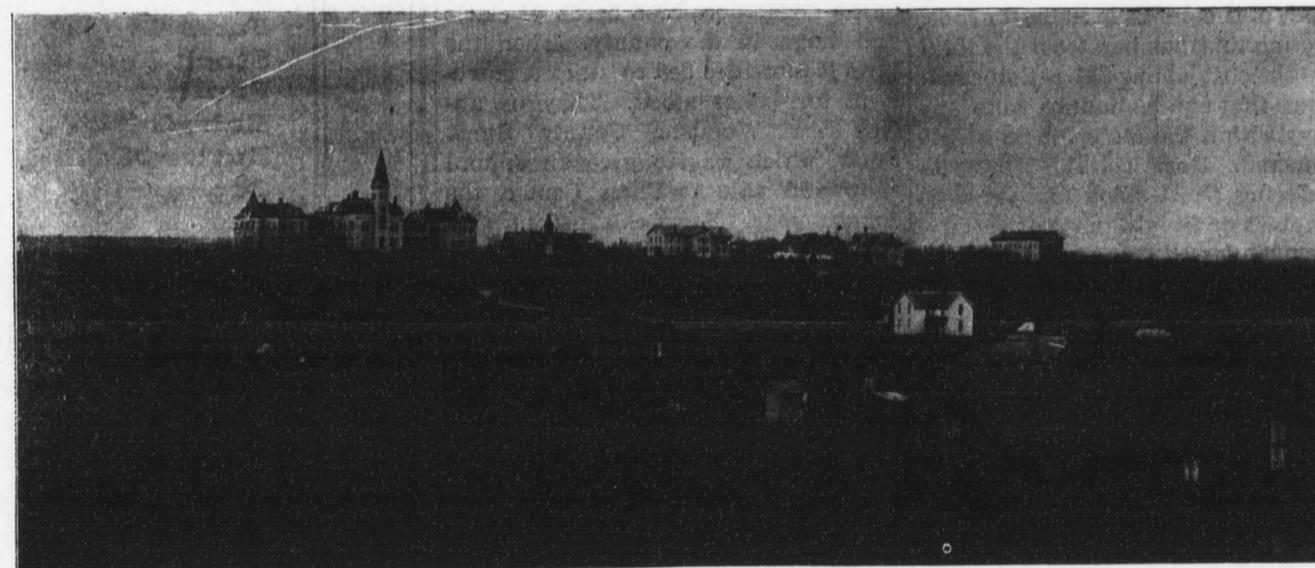
THE SCIENCE CLUB MET.

And at the Meeting, Monday, New Officers Were Elected.

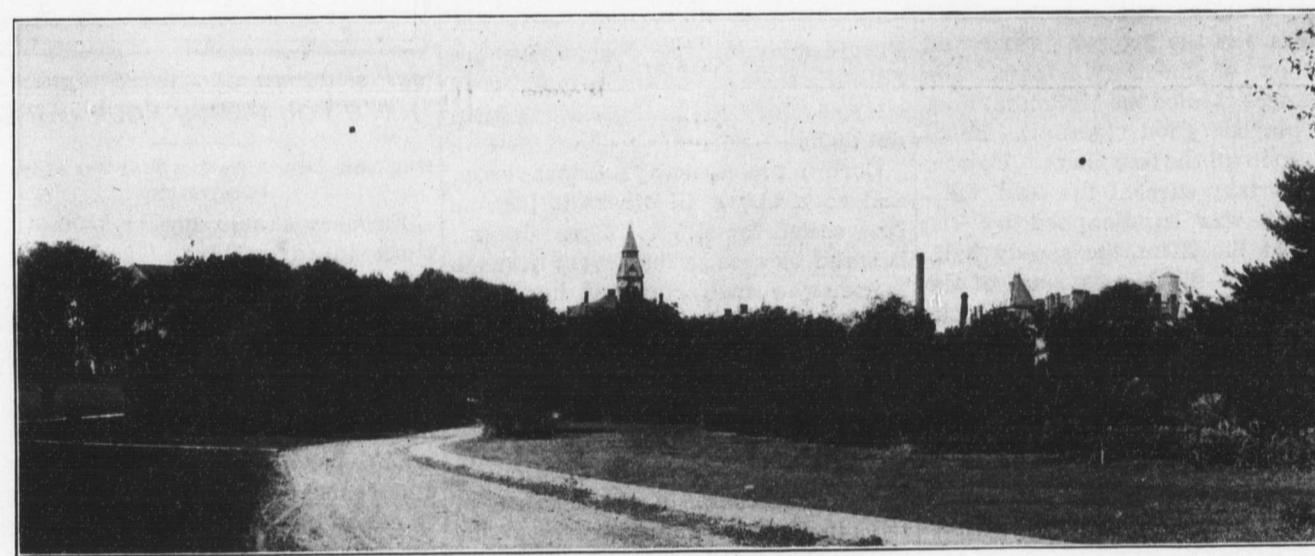
The Science Club met, Monday night, for the second meeting of this term. J. V. Cortelyou read a paper on "Various Forms of Words in English." Leslie A. Fitz told of "Some Wheat Problems."

Officers for this year were elected at this meeting. They are: H. J. Waters, re-elected president; J. O. Hamilton, vice-president; J. E. Kammerer, secretary; J. W. Seaton, treasurer.

Membership in the club is open to all who are interested in the advancement of science.



The campus in 1885—not a tree.



The same spot, twenty-six years later.

is no use in having "barny" kitchens. Rather, have a large pantry and a small kitchen with the cabinet, the sink, and everything used in the preparation of a meal close at hand.

13 GRADS IN ONE PLACE.

The Westinghouse Electric Plant Finds Places for K. S. A. C. Boys.

There are thirteen graduates of the electrical engineering course of the Kansas State Agricultural College at the works of the Westinghouse Electric and Manufacturing Company at Pittsburg, Pa.

G. I. Thatcher, '10, R. A. Snider, '10, T. Sherard, '10, G. A. Bushey, '10, A. G. Strong, '11, E. C. Reed, '11, G. T. Ratliffe, '11, F. W. Krotzer, '11, and H. H. Harbecke, '11,

are taking the two-year apprentice course offered by this company.

Roland Loyd, '10, and J. C. Brown-

ing, '10, have been promoted from this course to the regular work. They are employed in the department for "bed-plate" tests. R. E. Talley, '10, has been advanced and works in the experimental department. W. C. Hosick, '11, who did not enroll in the ap-

prentice course, has a regular position in the transformer test room. All

these men are making good and will

be holding responsible positions with

some electrical firm, soon. The edu-

cation received at the Kansas State Agricultural College is invaluable to

them in their work.

ground, and so erected that no water can run in where the ducks may nest. The essential requirements of the house are protection from rain and snow, and exclusion of fowl-eating animals. If the building is a large one, partition it into pens. The floor in every pen should be well bedded with straw or other suitable material. This bedding should be clean and be removed frequently. Nest boxes need not be bought or made; ducks prefer to lay in the bedding on the ground.

AS TO DRINKING WATER.

There is no danger of disease if the quarters are cleaned every day and good water is kept within reach of all. A pan, or small trough used for watering should be deep enough for the ducks to dip their bills into above the nostrils, otherwise their nostrils get clogged and the ducks suffer. This is all the water they need if they are market birds. Do not allow market ducks to swim. This will keep them from growing rapidly and retards fattening. It also tends to make the meat less tender. But give all breeders a swimming place, preferably running water which will not "puddle" and make the ducks "mudders."

Ducks are never troubled with lice unless housed with chickens or turkeys. They will not thrive if housed with other poultry; not even with

duck's digestion if plenty of sand and cinders are available.

Inbreeding should be carefully avoided. Better go to much trouble than run risks which inbreeding brings.

An application of lard or carbonated vaseline upon the heads once a week is good protection against gnats. Finely broken charcoal, mixed into the feeds, will serve as a good regulator for any bowel troubles.

Cryolite is Very Rare.

Cryolite is one of the comparatively few useful minerals which has not yet been discovered in commercial deposits in the United States, at least not in deposits such as can compete with those furnishing the imported product. In fact, there is but one important known deposit in the world, namely, at Ivigtut, an Eskimo hamlet on the southern coast of Greenland. Even this deposit is only about 3 acres in extent. Cryolite is used principally in the manufacture of opaque glass, for enameling of ironware, in the metallurgy of aluminum, and as a flux in the manufacture of white Portland cement. According to the United States Geological Survey, the imports of cryolite into the United States in 1910 amounted to 36 long tons, valued at \$2343. Refined cryolite is relatively high priced, selling in carload lots at about \$140 a ton.

SPUDS IN THE DRY LAND.

PROF. JARDINE TELLS THE RESULTS OF IMPORTANT EXPERIMENTS.

It's Just Possible, the Agronomist Says, to Make the Fallow Add Something to Your Income—Here's the Whole Story:

It is all very well for scientists to study and delve and dig for the ultimate salvation of the farmer in the dry-land belt, but first tell him—and do it quickly—what to grow that will bring in money. The sooner this is done the sooner the farmers, constitutionally skeptical, will respond.

"The farmer isn't concerned about fertility," said Prof. W. M. Jardine in the recent Dry Farming Congress at Colorado Springs. "What he wants is a living and he wants it now. We must help him to get it. Show him how to do something now; tell him how to feed his family, first, and then he will be in position to take up and study the problems we have discussed. The thing to do for him is to show him how to store up every drop of moisture to grow crops and produce money. We can do that in short order and with few words."

UP TO 300 BUSHELS.

Before Professor Jardine's appointment as head of the agronomy department in the Kansas Agricultural College, he started exceedingly valuable potato experiments for the United States department of agriculture in the dry-lands region. These experiments began three or four years ago at three stations in North Dakota, at Akron, Colo., and Nephi, Utah. About 25 varieties of potatoes were used and they were planted in every conceivable way. In three years the returns were from almost nothing to 300 bushels an acre. On five farms the yield averaged 100 bushels, marketable. Here, in brief, are Professor Jardine's suggestions:

For seed, use selected tubers, hand picked. If not too large plant single tubers having only one or two eyes. If large, cut in halves. Two eyes are better than six in seed potatoes.

Plant in rows three feet apart, and 20 to 24 inches apart in the rows, four inches deep; subsoiling is fairly satisfactory.

Use these varieties: Early Petosky, Irish Cobbler, and Early Ohio.

"These varieties are not the largest yielders, I admit," Professor Jardine said, "but they are the earliest and, therefore, the most advisable because the farmer may need the money."

THE WELCOME \$50.

Why should not potatoes be a good crop to grow on fallow land which, otherwise, would be idle for the year? That's the question.

"Why not plant 50 or 100 acres?" Professor Jardine inquired. "Why not, anyway, have crops two years in three? Wouldn't many a dry-land farmer like to have \$100 an acre from his fallow? Wouldn't he be delighted to get \$50? Mind, now, I don't recommend you to drop wheat in favor of potatoes, but here is a scheme that may tide over many families while they are waiting the result of a scientific test of systems we advise."

Only three crops in the dry lands are making money, Professor Jardine declared: Wheat, milo, and flax. Why not add another and increase the income? The farmer who thinks he will grow rich on one crop is much mistaken, he said. Potatoes could be planted in the low, waste places where grain cannot be sowed. They would prove to be the farmer's friend.

Professor Jardine's address attracted much attention from the thousand or more delegates in the congress. The papers gave it front page position in Colorado Springs and Denver.

WHO'LL BUY CATALPAS?

The Sad Story of a Tree Swindle that Went Fine in Kansas.

Of course you remember the catalpa swindle of last summer, don't you? Remember the man who went through Kansas and, possibly, other wealthy states, and sold for future delivery what purported to be catalpa trees?

Well, the agents are now delivering the goods, and Mr. Farmer and Mr. Houseandlot in the suburbs are having the times of their lives. Here are a few lines from the state forester, Charles A. Scott, just back from a trip about the state.

"During the past summer agents from certain out-of-state nurseries have literally flooded Kansas, selling one-year-old catalpa seedlings at exorbitant prices. They are now delivering the goods. At the price paid, \$25 a thousand, they should be entitled to receive the best grade of trees. However, not being satisfied simply to beat the farmer out of his cash, they are delivering a poor grade of trees. Catalpa seedlings are sold by most nursery men in three grades: Grade No. 1 includes trees from eighteen to thirty inches in height; Grade No. 2 includes trees from twelve to eighteen inches in height; and Grade No. 3 includes all trees below twelve inches in height, which are recognized the country over as culms. These are weaklings that are not worth planting.

An examination of the stock that is being delivered shows that at least 25 per cent of it belongs in the culm grade. Deducting this number from the total makes the cost about \$31 a thousand, for trees that can be bought from any nursery within the state for \$8 or \$10 a thousand. Some reliable nurseries are offering No. 1 stock, delivered at the express or freight office of the buyer, at much less."

BAKER BOOTED THE BALL.

Which, Being Translated, Means the Aggies Lost Saturday's Game 3 to 0.

A field goal by Baker, and a lack of them on the Aggies' part, gave the Methodists a victory last Saturday afternoon, 3 to 0. Captain Dalton won the game for Baker when his place kick went over the goal posts in the first quarter of the game. After that the Aggies kept their opponents on the defensive and forced them to kick continually.

Holmes was the ground gainer and pepperbox of the Aggie team. His line plunges riddled the Methodist line. Sims played good football. Felps mixed up in all the line plays. Pollock and Sidorfsky carried the ball well. The team was handicapped by the absence of Ike Hehn, the speedy half.

Dalton was the biggest part of the Baker playing. His speed and kicking won the day. Capps and Baty held down the ends in good shape.

GETTING NEAR UTOPIA?

A Beet-Growing Contract that Looks Good to the Farmers.

The corporation and the farmer are getting closer together. Each has begun to realize that he can do better by co-operation than by constant fighting. A good example of this is a corporation that buys beets from the farmers in Western Kansas.

The contract is especially liberal in all its clauses. The farmer agrees to plant, cultivate, plow out, and deliver at certain specified places and receive a stipulated amount for every ton of clean topped beets.

The company, in return for the foregoing, agrees to protect all beets from sun and frost at the time of plowing out. It gives the grower the seed and thins and bunches the beets as needed. The beets are hoed, pulled, topped, and piled by company labor without cost to the grower. The beets are to be cultivated with company implements furnished without cost.

The beets are divided equally between the grower and the company.

Provision is made for negligence upon the part of the grower, in which case the company may take charge of the crop and charge the labor to the grower's share. All the farmer is out in such a case is the use of the ground and his own labor. The company becomes, in fact, a partner, and the two work together for the good of both.

When steel knives and forks have become tainted with fish they can be rubbed with fresh orange or lemon peel and the taint will disappear entirely.

HOGS ARE BETTER NOW.

FEWER RAISED, BUT MORE PURE-BRED THAN EVER IN KANSAS.

Census Figures, Which Show that the Number of Hogs Reared in Kansas is Decreasing, Give Wrong Impression.

Kansas has about two million fewer hogs and cattle than ten years ago. There are on the farms to-day nearly three million hogs and more than three million cattle.

The cause of this decrease is the changing economic conditions. The day of the scrub is passing. He is not a profitable financial proposition. The farmers are discovering that it is not profitable to keep low-grade animals. Therefore the total number of animals is decreasing faster than the number of well-bred animals is increasing.

However, the number of well-bred animals is increasing rapidly. Take, for example, the improvement of farm animals in Woodson county. Five years ago there were not more than half a dozen pure-bred herds of cattle and hogs in the county. Then the farm leaders decided to start a movement for better stock. They organized the Woodson County Stock Show, which was to give an annual show and sale at Yates Center, the county seat. Farmers' institutes to discuss animal breeding and feeding were organized.

To-day most of the farmers of the county have pure-bred sires at the head of their herds. And they have not yet fairly started in the work they mean to do.

When Kansas improves the quality of the herds the numbers will increase, for well-bred animals are profitable.

THE VERY POPULAR SILO.

From 62 in 1909 to 2000 in 1911 is a Big Increase.

Kansas has more than 2000 silos now. In 1909 there were only 62. Progressive farmers everywhere are building them. Those who have used silos say they couldn't get along without them.

Corn is preëminently a Kansas crop, and corn above all others is the one best suited for silage. Then doesn't it stand to reason that every Kansas farmer who raises corn and has stock to feed should have a silo? A silo makes it possible to keep two cows where one was kept before. Who would not gladly double his income?

The Kansas State Agricultural College is a strong advocate of silos; in fact, the increase in the number of silos in Kansas is due largely to the "Dairy Train" sent out by the college and the Santa Fé Railway in 1909. If you haven't a silo now, plan to build one, and if you desire advice on silo building the extension department of the Kansas State Agricultural College will be glad to help you.

A Few Words From Oley.

Oley Weaver, '11, writing from Douglas, Wyo., says: "This is a very good town and is holding its own through the hard times the West is experiencing just now. Perhaps it is doing more than holding its own, for two new business houses were established in piano boxes Hallowe'en night. Situated on vacant lots, one bore the sign 'saloon,' and the other 'dentist,' said signs being borrowed for the opening. The Seattle-Galveston Burlington line through here is assured and will be completed next spring. Wool is as yet unsold, making local cash tight."

The Scrubs Swamped Ft. Riley.

The freshman football team ran away with Fort Riley last Saturday, as the score of 35 to 0 shows. Judging from the amount of noise that issued from the athletic field, the scrubs must have put on a sensational exhibition for the Aggie bugs.

Have a paper flour sack handy for sewing clippings, threads, and waste paper, and dispose of it to the ragman for articles needed.

Men of Brains

Never get through studying books. If you are through

Going to School

let the

Kansas State Agricultural College

Come to You

Correspondence Courses:

Soils
Farm Crops
Stock Feeding
Poultry
Dairying
Butter Making
Orcharding

Drainage
Road Making
Concrete Work
Cooking
Sewing, and
Twelve others

Send for Correspondence Study Pamphlet. Let me have your wasted hours.

Director College Extension, Box G

Kansas State Agricultural College,
Manhattan, Kansas

HAVE YOU NAMED YOUR FARM?

The New Law Affords a Way for Farmers to Advertise.

Farmers should not be behind the times in advertising. The last legislature gave them a means for cheap and effective advertisement. A law was approved last March which provides that any farm owner who will pay the county clerk one dollar for filling out a certificate and registering a name for his farm may have the exclusive use of that name in that county.

You know what a trademark does for a manufacturer. On the same principle, the registering of farm names should be valuable to farmers, cattlemen, and gardeners. A name that is "catchy" seems the most popular.

In one county several wanted the name "Fairview," and at Topeka the post-office department is having trouble with mail addressed to the farm name instead of to the post office. This trouble could easily be avoided if the owner would use a letter head.

Here are some suggestions for names: "Pond Place," "Elmhurst," "Oak Grove Farm," "Silver Bend Home," "Sunny Slope," "College View Place," "Pleasant Prairie," "Willow Hollow," "Orchard Grove," "Hillside Farm," "Big Springs," "Iron Springs," "Little Springs," "Big Muddy Creek Farm," "Wonder Bottom," "Percheron Place," "Sulpher Springs."

PLENTY P'SIMMONS HERE.

Seventy-Five Quarts to the Tree. Not Counting What Was Stolen.

Harvest time of the persimmon crop is at hand in the horticultural department of the Kansas State Agricultural College. All the trees have borne fruit this year, for the first time. The crop is extra heavy, and does not seem to be much affected from the drought of this last summer. The yield is estimated at 75 quarts to the tree, besides a conservative estimate of 25 per cent to 30 per cent which was harvested by those who went their way

rejoicing after stuffing themselves free.

The red persimmon requires a heavy frost before it completely matures. Usually the crop is ready for harvest about the first of November. The yellow persimmon may be harvested any time after the fruit has become a bright yellow. The crop generally is ready for harvest any time after the middle of October.

Soak Curtains.

When washing new curtains you will generally find that they are full of lime and take a quantity of soap, etc., to make them anything like clean, says the San Diego Union. This expenditure of soap and a great deal of trouble may be saved by soaking the curtains overnight in water in which a little salt has been dissolved. The salt draws the lime out of the curtains, making them quite easy to wash.

Had a Little Fire Scare.

The college fire department was called out Wednesday morning for the first time in more than a year. Considerable excitement was created for awhile until it was found to be a false alarm. Someone had noticed steam escaping through the roof of the tower on the new gymnasium and thought it was smoke.

Referred to Prof. McGarragh.

How many people could pay \$250 and not miss it? And one hundred people paying it makes \$250,000 right off, does it not, if I have not forgot the little I learned at school about arithmetic?—From Mayor Gaynor's speech, New York Herald.

A Display of Fertilizers.

The horticultural department believes in one sort of advertising of the Armour Packing Company. Prof. Albert Dickens has received from that company a dozen bottles of the different brands of fertilizer put out by its plant. The samples will be used in class work.

THE KANSAS INDUSTRIALIST

Volume 38

Kansas State Agricultural College, Manhattan, Saturday, November 18, 1911

Number 6

"NOT A THING TO WEAR!"

COLLEGE GIRLS, ONE SAYS, DON'T HAVE BEST CLOTHES ANY MORE.

Little Distinction Between Class Room and "Sunday" Gowns, Now—And What Poor Taste Some Girls Show in Their Everyday Dress!

Few college girls of to-day have best clothes. No, nothing is wrong with the crops. Bank accounts are doing very well, too, thank you. And girls wear prettier things now than ever, but fully one-half of the girls in any large college make little distinction in their dress for class rooms and for Sunday or dress-up occasions, says a girl who is a student in the Kansas State Agricultural College.

Too many girls, these days, lack a saving sense of the eternal fitness of things. Silk dresses, elaborate blouses made with low neck and short sleeves, picture hats with sweeping willow plumes, and velvet shoes are as out of place in the class room as in the kitchen. But some girls wear them, and their classmates with smaller means suffer envious heartburnings or wear cheap imitations of finery.

Where cheap finery begins, neatness stops. Too often the velvet shoes are run down at the heels, the silk waists are soiled and spotted, and the lace ruffles are torn in several places. But the girl who wears them doesn't care. She has permitted her standards of dress to become as cheap and draggled as her finery.

No woman is really educated until she has learned the secret of good dressing. Simplicity of cut and trimming, quiet, harmonizing colors, and absolute neatness in all details are the marks of dress by which real gentle-women are known. The college where girls do not learn these things has failed in one purpose.

A "K" FOR DEBATERS.

A Pattern, Now Shown in the Main Hall, Is Better Than Any.

The new debating "K" is on exhibition in the bulletin board of the Forum in the main hall. The Forum met Wednesday and changed the style of the design. The new pattern is much superior to the old in balance and finish.

This is one of the few colleges that give official monograms to intercollegiate debaters. The "K" also carries with it a college credit and membership in the Forum, the honorary debaters organization of the college. Plans are made for four intercollegiate debates this year and much interest is being shown by the debaters.

TEACHING THE MOTHERS, TOO.

High School Instructors in Domestic Science Report a New Field.

Graduates of the domestic science course of the Kansas State Agricultural College who are teaching the high-school girls over the state to cook, report a new field developing for their work. Interest is now being taken in this work in the high schools, not only by the girls, but by their mothers, also. At Effingham seventeen women are enrolled in a cooking class at the Atchison County High School. They meet twice a week and seem as eager to learn as their daughters.

FORCE RHUBARB IN THE CELLAR.

Then You Can Have Pies and Sauce in the Winter.

Grow rhubarb in your cellar and you can have good pies this winter. It does not take much time or money, and it will make a variation in your menu. You can do it now, as there has been a frost, which is necessary before the plants are moved.

Dig up the roots of some thrifty rhubarb plants. They should be more than two years old for the best results.

Divide them so that every division will have from one to three eyes, and pack them close together on the cellar floor. Fill in around and above them with rich soil. The more fertile the soil, the larger and more brittle the stalks will be. The crowns of the plants should be covered with four to six inches of dirt. Keep the soil moist, but avoid too much water. The temperature of the cellar should be between fifty-five and sixty degrees. A lantern or small stove may be necessary in cold weather to warm the cellar.

Light is not a requisite with rhubarb. The stalks have a better quality and are less acid when grown in the dark. The less acid there is, the less sugar is required to sweeten the rhubarb when cooking it. If you are fond of rhubarb sauce or rhubarb pie, there is no reason why you cannot have it.

TIME YET FOR BULBS.

And Here's a Mighty Attractive Way to Arrange the Colors.

Nothing would add so much beauty to your lawn next spring as a bed of tulips and hyacinths in full bloom. It isn't too late to plant the bulbs. Any time this month will do. And with the first warm days of April they will bloom ahead of any other flowers.

Bulbs are cheap at this season of the year. After they are planted they require no attention. They will come up and blossom every spring for six or seven years, and the narcissus, if well planted, will blossom for twenty years without resetting. Other good bulbs to plant are lilies, snowdrops, jonquils, and crocuses.

To prepare the bed for planting, lay off the size desired, being sure that the sides are straight. Three feet wide and ten feet long makes a bed of good size. After setting the guide lines, spade up the bed to a depth of eight inches, removing the dirt and leaving the bottom smooth. Then cover the bottom with sand to a depth of about one inch. Do not put any fertilizer in the bed. The bulbs grow better without it.

Set the bulbs in this bed of sand and cover them with the soil that was removed. After they have blossomed and died down the tops must not be pulled off until they are entirely dead, as the sap in the stalk goes back to the bulb for next spring's plants. When they are dead, annuals may be planted in the same bed without disturbing the bulbs.

A very pleasing way to arrange bulbs in a bed is by the color combination. Have a solid color in the center, with a border six inches wide of some other color. The crocus is a good bulb for the border. Two hundred and fifty bulbs would be enough for a bed the size mentioned, and would cost about \$1.50. Crocus bulbs should be set about two inches apart.

Hyacinths, also, may be used for a border. One hundred bulbs costing about \$3 would be required. Set these bulbs six or seven inches apart. If tulips are used, the late variety may be set in between the early variety, and after the first are dead the later ones will take their place.

With little trouble you can have crocus blooming all over your lawn next spring. Procure as many bulbs as desired in different colors. Take a crowbar and go over the lawn. Wherever you wish to plant a bulb sink the bar three or four inches deep and make the hole large enough for the bulb. Put a little sand in the hole, then the bulb right side up, and cover it with sand. If you do not mow your lawn too early in the spring, before the moisture in the top of the crocus has gone down to the bulb, they will come up year after year and you will have a pretty lawn every spring.

Dig up the roots of some thrifty rhubarb plants. They should be more than two years old for the best results.

TAKE IN THE TOOLS NOW

DON'T ALLOW IMPLEMENTS TO STAND UNCOVERED IN THE WINTER.

A Machine Left to Itself Will Last Only One-Third as Long—Here's a Way to Make a Storing Shed Cheaply.

It's time to scour and oil the plows and other implements and place them under good shelter for the winter. Then next spring's work can be started with machinery which is not rusty or in bad repair.

Why put it off? There should be plenty of time now, and it takes only a little. The money and work spent in preserving a machine are very small items when compared to the loss by not taking care of them. A farmer who permits his machinery to stand unprotected through the winter should be ranked in the same class as those that let their stock run down. He is a detriment to a progressive neighborhood.

SHELTER FOR \$60 OR \$70.

C. F. Chase, assistant in farm mechanics at the Kansas State Agricultural College, says that machinery which is not oiled and unsheltered will last only one-third as long as machinery which has had good care. But it will do no good to do the work by halves—just oiling and not sheltering. In this case the oil is soon worn off and rust takes its place. The metal cannot be scoured until it has been taken to the blacksmith shop and polished.

Mr. Chase estimates the cost of building a shelter at \$60 or \$70, if built by the farmer during his spare hours. By adding \$30 or \$40 to this, the sides can be enclosed and roller doors put in the house. This, at first glance, seems to be rather expensive, but if the life of a \$100 machine is prolonged eight to twelve years as a result, it can be readily seen that the shed would be a valuable investment.

A less-expensive shelter can be built by placing posts a few feet apart in the ground and nailing on top pieces. Poles and brush are then thrown on top and straw or slough grass is placed upon these poles. This is only a protection from rain and sun, but is worth many times the trouble and time spent in erecting.

SAVING \$1000 IN FIVE YEARS.

On a farm of 160 acres there is, usually, about \$1000 in machinery. If this is left out in the field through the winter, or just pulled up under some tree, it can not give good service for more than five years. But if it has had good care, oiled every time it is put away and sheltered under a good roof, its term of service will be lengthened to 12 years or longer. Therefore, \$1000 is saved about every five years if care is taken of the machinery. Is it worth the trouble?

On every up-to-date farm, books are kept so that any leaks in the profits may be discovered. By preserving the farm implements one of the largest leaks is stopped.

CONCRETE POSTS NEVER ROT.

Heavy, Smooth Wire May Be Used for Reinforcing Them.

Concrete fence posts never wear out. To make them, forms of wood or metal are used. Where various forms are required, as corner post, brace posts or gate posts, probably wood forms are the cheaper. In case a large number of posts of one kind is to be used, metal forms are more desirable. They are lighter, more easily handled, and last longer than wooden forms. They also give a better surface finish to the concrete.

There are several kinds of reinforcement. Perhaps the best is the commercial rods placed on the market for concrete reinforcing. The more com-

mon materials for this purpose are heavy, smooth wire and galvanized barb wire.

Most forms for concrete posts are triangular. Owing to its shape, and having reinforcement in each corner, this post is almost as strong as a square one, and to make it requires less material and labor than for a square one.

The mixture of concrete depends upon where the post is to be used. One part cement to four of sand is good. For posts in isolated places, not subject to strain, a mixture of one to five is sufficient. Those used in a corral or around farm buildings where stock is kept are subject to constant strain and a mixture of one to three is preferable. This gives a more dense material when hard.

HONORED THE PRESIDENT.

The Teachers' Association Chooses the Agricultural College Head as Leader.

The presidency of the Kansas State Teachers' Association was given to H. J. Waters, president of the Kansas Agricultural College, last week at the annual meeting of the association in Topeka. Other members of the agricultural college faculty also were honored with offices in the association. T. J. Headlee, professor of entomology and zoölogy, was made chairman of the botany and zoölogy round table for next year. J. O. Hamilton, professor of physics, was elected chairman of the chemistry and physics section. W. H. Andrews, assistant professor of mathematics, was chosen head of the mathematics division of the association. G. E. Bray, superintendent of the shops, was elected vice-president of the association for manual training teachers. Raymond Taylor, instructor in history and civics, was elected secretary and treasurer of the State History Teachers' Association.

A reunion dinner followed the last meeting of the association Friday evening. One hundred and thirty-five alumni and instructors of the agricultural college attended. President Waters, who addressed the college folk, spoke encouragingly of the progress of agriculture and domestic science in the schools and clubs of the state. He complimented the women teachers who had successfully introduced agriculture into the rural schools.

MANY LEARN HOUSEKEEPING.

Of the 623 Girls Enrolled, 155 Are Taking the Short Course.

The girls of Kansas—623 of them, anyway—certainly are taking advantage of the opportunities offered them at the Kansas Agricultural College for learning all they possibly can about housekeeping, cooking, and sewing. Of the 623 enrolled this term, 155 are short-course girls. This course lasts six months. The girls taking it are not required to take anything else.

In the domestic art department the enrollment has gone up to 580. There are in this department about the same number of short-course girls as in the domestic science department. Miss Antonetta Becker, professor of domestic art, expects soon to have exhibits showing the way raw materials are converted into the finished articles in the big factories in the East. Some beautiful work is being done by girls in the sewing classes. Some of it will be on exhibition later in the term.

But Plow Deep, Bill.

Formed by the polyps of a shallow, summer sea, fixed by the subtil chemistry of the air, and comminuted by the Aeolian geology of the Great Plains, the soil of Kansas has been one of man's richest possessions.—*From the Kansas Farmer.*

WEEDS MAKE GOOD FEED.

RUSSIAN THISTLES A HIGH-CLASS FORAGE CROP IN DRY SECTIONS.

The Discovery That Horse Weeds and Sunflowers Can Be Used for Silage Is Encouraging in a World Full of Plant Pests.

Occasionally, someone finds a weed that is really useful—about as encouraging a discovery as can be made in a world where billions of plant pests spring up every year to worry people. Sunflowers and horse weed, it was discovered not long ago, make good silage. Now Russian thistles are making friends because they resist drouth and are a good forage. Even sand burs—you won't believe it—are useful as food for stock. They have a high food value, experts say.

The most useful common weeds utilized at present are: Russian thistle, horse weed, foxtail, crab grass, soap weed or yucca, prickly pear, and sunflower. The thistle is drouth resistant and is used as forage in many of the dry localities of the Southwest, where other forage crops cannot be depended upon.

BUGS KEEP AWAY.

The horse weed, which grows a little like hemp, is abundant in one-third of the counties of Kansas. It has been used for silage and it makes excellent pasture for cattle, horses, and hogs. During the grasshopper year in Missouri, stock was kept on horse weeds, which shows that they contain considerable food value. Insects do not bother it—probably because of a bad flavor.

Over most of Kansas a weed known as foxtail is used extensively for hay. It resembles millet and will make quite a growth in stubble fields or on newly broken ground. Cattle eat the hay with apparent relish. Crab grass is another weed which grows luxuriantly in stubble fields and does well on loose, sandy soil. It is used for hay and resists drouth.

The soap weed, or yucca, is of more economic importance than any of those mentioned. It is common over all the loose, sandy soils of the Southwest and grows without cultivation. Soap and yucca oil are made from it and a wonderful fibre may be obtained. It, also, is a good drouth resister and is insured against destruction by insects because of its tough skin.

THE CACTUS FOR FOOD.

The prickly pear, or cactus, has proved a valuable forage crop for cattle, sheep, and hogs in the West and Southwest. It is a good insurance against feed famine in those sections. Dr. David G. Griffith, of the bureau of plant industry, has studied conditions in the Southwest and has found that the cactus makes excellent food for cattle and contains a large amount of water, which is an advantage in dry regions. By growing them in large fields and burning the spines off the plants, they are solving the problem of forage in those regions. Along the Mediterranean Sea a partly spineless form grows abundantly, and David G. Fairchild, of the department of agriculture, has sent Luther Burbank a number of these forms at various times. Burbank, by a system of plant breeding, has been able to produce from these a plant free from spines and has been selling it at fabulous prices.

To the sheep raiser nearly all weeds are of some use. Sheep will eat a hundred different weeds that cattle will not touch, and if more sheep were raised in Kansas there would be less trouble from plant pests. Weeds also make an excellent green manure if plowed under at the right time.

Lobster salad should be eaten as soon as possible after dressing is added, else it is unwholesome.

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PRES. H. J. WATERS Editor-in-chief
PROF. C. J. DILLON Managing Editor
DR. J. D. WALTERS Local Editor

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SATURDAY, NOVEMBER 18, 1911.

AS TO PUBLIC SPEAKING.

If there is any one thing that a man needs, and needs often and in the most unexpected circumstances, it is the ability to express himself clearly, and without falling over his feet, before an audience. A man—or woman, for that matter—may study languages for years; he may take industrial journalism or journalism straight; he may, even, have the rare gift of remembering names in introducing persons; he may have a fairly accurate idea of where his hands and feet belong, in public, but he will never be able to second the motion without stumbling over something if he goes through college without some instruction in speaking. It may be that a boy will not realize the importance of this in his freshman and sophomore years. It may be that for a while he slouches along doubling his negatives and turning red in the face every time anyone addresses him, or he finds it necessary to speak to another. But just so sure as that boy lives the time will come when he will regret, and deeply, the golden hours he wasted while at school.

One of the very finest opportunities for polishing, for refining, is presented in the department of public speaking, in this college. Every young man owes it to himself—and again we include the young women—to participate in the activities of that department. It may be well, here, to quote from a little circular just issued by Everett Parker Johnston, assistant professor in charge of this sort of work. It goes to the point:

"No matter what your occupation after leaving school, there will be everyday need of clean-cut, vigorous speech. Platform or no platform, you must 'say your own say,' and as someone remarks, 'Finally 'tis his who says it best.'

"Have you heard this quaint comment: 'Tis said that, in this goodly land of Uncle Sam, wherever two or three are met together one is elected president, another secretary, and the third man is invited to make a speech.' You probably will be this third man, so get ready. Learn to formulate your thoughts; learn to organize; learn to conduct business meetings. Do it now—this year.

"Remember, too, that while making ready 'to preach the gospel of improved agriculture' and other 'cultures' you are surely gaining for yourself the finest sort of mental and physical discipline possible.

"The road to success is long, and leads up hill; but with every step the scenery grows more attractive.

"If you become confused about the way, drop into the public speaking rooms in the Nichols Gymnasium and ask for a pointer. If we can give you a lift, we shall be glad."

ELECTRICITY AND CROPS.

Farming with electricity—that is, using electric currents to stimulate plant growth, a recent development—was the subject of an interesting discussion in student assembly one day last week by B. F. Eyer, professor of

electrical engineering at the Kansas Agricultural College.

In Tulare and Kern counties, California, Professor Eyer said, electrical energy is transmitted to farms that irrigate a total of 18,000 acres. The power required to do this is approximately 5300 horse power.

But the most sensational economic development of electricity is the use of electric energy for plant stimulation. Sir Oliver Lodge, a leading English scientist, conducted a series of experiments on 19½ acres. The European practice is electrostatic in nature. Wires are strung above the field in the form of a network, fifteen to seventeen feet above the surface of the earth. A rectified current of electricity having a potential of 100,000 volts is used. The wires are charged positively. The negative wire is grounded. Fields thus treated, for ninety days showed that both the quality and quantity of the yield were improved and the growth greatly increased. Wheat showed an increase of 45 per cent; corn, 35 per cent; potatoes, 20 per cent; beets, 26 per cent; strawberries, 50 per cent, and barley, 39 per cent. Practically the same results were obtained on a 24-acre field in Germany. The theory advanced is that the flow of sap is stimulated and the nitrogen of the air freed and made available as a fertilizing agent.

"This method of using electricity is being followed in a few places in the United States with results comparable to those obtained abroad," Professor Eyer continued. "Judge Williams has a farm in East Northport, Long Island, where the Lodge system is used. Mr. Rawson has a farm at Arlington, Mass., where the same system is being tried out.

"If it were possible to apply this system to any appreciable part of our truck farms and small grain fields it can readily be seen that the food problem would be solved for some time to come."

COLLEGE PROFESSORS, INDEED!

Colleges are getting pretty far into the practical when they essay to teach "Hog Killing." —*The Kansas City Star*.

Strange, isn't it, that anyone in an agricultural college should "essay to teach hog killing?" The man who wrote those glowing lines doubtless believes, also, that no one, except he be actually on a "run" or slaving over a copy desk, knows anything about the newspaper business. But the criticism should be directed not so much against the writer as against the peculiar system that attaches to an expert, modern farmer the title of "professor." It is a handle strangely out of keeping with the job. If a few reporters and editors and farmers would take time, some fine day, to see these professors at work in the fields, in the barns and pens and, later, in the slaughter-house, they would, doubtless, be amazed to learn that these men actually know how to do things, and, moreover, how to do them right.

There are no city men on the staff of the average agricultural college, as "city man" is understood. They are, primarily, workers, the sons of farmers—this is especially true in the case of President Waters—accustomed to the most practical methods, the most common-sense systems. They know how to kill hogs, if it chance to be a part of their business to know it. If only a man once enter the smokehouse of President Waters; if only he have the opportunity to taste his hams and his shoulders and bacon and, most delicious of all, his sausage, he will go away prepared to resent quickly any asperion with respect to "college professors."

THE EAST AND THE WEST.

A marked decrease in farm acreage is shown in the East during the last decade. Six of the leading agricultural states of the North Atlantic group lost an average of 4.4 per cent in acreage, says the *Breeders' Gazette*. This means a total of 2,834,000 acres removed from farm production. This occurred during a period when the city population of those states was increasing rapidly, with prices for farm products at an unprecedented elevation, so that there was great incentive

A Golden Text.

Hear me, O Lord; for thy loving kindness is good: turn unto me according to the multitude of thy tender mercies.

And hide not thy face from thy servant; for I am in trouble: hear me speedily.—*Psalm 69:16, 17.*

for extensive farm operations. Much of this land was abandoned because its low production under antiquated methods was not considered profitable. At the same time thousands of acres were reclaimed during this period by progressive farmers, thus preventing the showing from being still more discouraging. In the Central West there was little change in farm area except in Nebraska, where thousands of acres of semi-arid lands in the western part of the state were brought under the plow. Evidently the available farm land in these old prosperous states is practically all occupied. There is yet room for large expansion in the West and South, but the principal increase in farm production in the central belt must apparently come from increased yields per acre.

THE GLORY OF GARDEN CITY.

Before this piece is read by enthusiastic thousands, the people of Garden City, Kansas, will have celebrated the one hundredth anniversary of Charles Dickens' birth. Think of it, you old-timers! Marvel over the changes that come in a quarter of a century! It seems a little time, too. Why, Garden City hadn't a copy of David Copperfield in those days, though it may have seen "Hard Times." No one had the nerve to suggest any kind of a celebration except when night came and the weary

Truths and Garish Paintings.

T o know by rote is no perfect knowledge, but to keep what one hath committed to his memory's charge is commendable; what a man directly knoweth that will he dispose of, without turning still to his books, or looking to his pattern. A mere bookish sufficiency is unpleasant. All I expect of it is an embellishing of my actions, and not a foundation of them, according to Plato's mind, who saith constancy, faith, and sincerity are true philosophy; as for other knowledge, and tending elsewhere, they are but garish paintings.—Montaigne.

dropped into bed. How the land has grown since then! How it has improved! Where—in 1878, for instance—there was only sage brush and a siding, now stands a thriving little city, with good streets, attractive stores, a tip-top newspaper run by a man who believes in what he is doing and in western Kansas, telephones, and, indeed, about all the conveniences of these days that human beings need. And a lot of uncommonly fine people, too.

Wonderful, wonderful. To think of Garden City having a Charles Dickens' celebration! The power of books!

TWENTY-FIVE YEARS AGO.

A Few Items Taken from the Columns of The Industrialist of '86.

Last week we wrote an Ohio firm for information about a new and extensively-advertised feed-mill which seemed suited to our new experimental barn. The reply came promptly from the secretary of the firm to the effect that the company was familiar with the Kansas college experiments and valued them highly, and had copied reports extensively into its general catalogue. The secretary added that the company was desirous of encouraging the college in its work, and would be glad to donate us any mill that we might select from its catalogue. We like this sort of "encouragement."

The news of the sudden death, on Monday evening, of Mrs. Hawkes, wife of Superintendent Hawkes, of the mechanical department, was a painful surprise to the little community on College Hill. Mrs. Hawkes had been known by intimate friends to be in precarious health, but none was prepared for the news of the great change which overtook her Monday evening. Very many hearts of teachers and students will warm sympathetically towards Mr. Hawkes in this, his great affliction—the trial perhaps of all others least easily fortified against.

A good deal of that much-dreaded "moving" has been going on quietly on the Hill during the past three or four days. First, the President has shifted his family, with all its various impedimenta, into the new presidential mansion; then the professor of agriculture has moved into the old house lately occupied by the President; and, finally, there has been more or less of moving from the old barn into the new experimental building.

The history of the growth of our knowledge of physiology was the subject of Professor Kellerman's lecture yesterday afternoon. The contributions made to our knowledge by such worthies as Hippocrates, Herophilus and Gallen were quite fully stated, with much of the more modern investigations in the same line, the whole forming a most instructive and interesting address.

Among recent additions to the equipment of the chemical laboratory are sand baths, water baths, and drying closets, to be heated with steam; and a short-arm aluminum-beam balance of five hundred grammes capacity, sensible to one-tenth milligram. The latter was obtained from Queen & Co., and is one of their new form of balances.

Again a number of immature students have been invited to visit their homes and stay there. Inability to keep up with the classes, or indeed to keep in sight of them, seems to be the chief obstacle to their stay at college.

With the beginning of the month, our new herdsman, John Smith, began his duties in connection with the college herd. Mr. Smith was for four years in charge of the celebrated T. L. Miller herd of Herefords.

President Fairchild lectured on "Books and Their Uses" to a Manhattan audience Thursday evening. The lecture was given under the auspices of the Chautauqua Literary and Scientific Club.

The presence of the secretary of the National Teachers' Association in Topeka, yesterday, to arrange for the meeting of next summer, called President Fairchild to the capitol yesterday.

The Websters propose to "wake the echos" in special session this evening, and doubtless will succeed in the lively fashion of that ambitious society.

It was generally remarked by old members that the late meetings of the Academy of Science were the best and most satisfactory ever held.

WHEEL-HOES SAVE TIME.

They Mean Much to Every Person Who Does Gardening.

"The wheel-hoe is as important for the city gardener as for the commercial huckster," says David E. Lewis, assistant in horticulture at the Kansas State Agricultural College. It is a time-saver. If the business man wishes to have a garden, it requires much effort on his part to keep it cultivated. If a wheel-hoe is used, the garden can be hoed every evening if desired. For the truck gardener it is an essential tool. The wheel-hoe bears the same relation to the old-fashioned hoe as the lawn-mower to the scythe.

Some wheel-hoes have enough attachments to plow, plant, and harrow the ground and then keep the weeds down and the soil stirred until the garden is matured. These combination tools are higher priced. The popularity of the wheel-hoe is based on actual efficiency and time saved. Students in the department of horticulture are instructed in the use of this useful tool.

Blessings of the R. F. D.

Of all the works of Uncle Sam,
Beneficent and wise—
The mighty irrigation dam,
The conquest of the skies,
The money coined sound and true,
The seeds he scatters free—
There's none that holds a candle to

The R. F. D.!

The R. F. D., with lengthened arms,
Extends its kindly sway
To little isolated farms

From cities far away,
Through country lanes it reaches out,

And, ah, its travel-feet are stout—

The R. F. D.!

The blessed little box of tin
Beside the winding road,

What treasures may be stored therein
From out the postman's load!

The barefoot children caper down

And crowd about to see.

The R. F. D.!

The long and lonely country days
Are lightened by the mail,

And cheery hopes and better ways

Spring in the postman's trail.

And farm and city, understood,

More happily agree.

God bless the bond of brotherhood.

The R. F. D.!

—Amos R. Wells.
Farmers' and Drovers' Journal.

SUNFLOWERS.

Meanwhile, Mr. Farmer, burn the chinch bugs in the bunch grass and the big blue stem.

About this paper bag cookery: Isn't the paper trust behind this scheme? How about this?

We're mighty glad that 11-11-11 has passed. Next time it comes around we'll use it. We forgot it this time.

The police were "grilled" in Wichita, last week, according to the *Beacon*. In Chicago they were "roasted." In Manhattan they are missing.

The woman who wrote the Cook Book of Left Overs ought to make a fortune out of it. It certainly is needed in even the richest families.

We are now dieting for a postgraduate course in cold turkey, turkey hash, turkey giblets, turkey on toast, and the other reviews of reviews.

A judge in Chicago has held that it is not cruel for a wife to throw baked potatoes at her husband. Doubtless he knows she won't hit the mark.

"Shall teachers carry a lunch?" demands the Wichita *Beacon*. They surely will if their salaries aren't increased. And then it may be a *lunch-on*.

Did you do your Thanksgiving shopping early, this year? Get a turkey and have it set aside for you? Few cranberries and a bowl of gravy and some biscuits?

The Cub Club was organized, a few days ago, by students in the department of industrial journalism. There never was a day when a club wasn't a good thing for a cub.

A certain person has asked permission to have 500 skunks on his farm, intending to raise them for their hides. If the people of that district have motor cars, however, this will be all right.

It was, of course, inevitable that Mrs. Vermilya should be referred to as a "Second Belle Gunness." The *Weekly Star* did it, last Wednesday. We now await reference to Lucretia Borgia.

"Spurred by the anks of ambition," sobs the *Kansas Farmer*, "the American wanders afar in his search for the yellow fleece of Colchis." What d'you know about that? "Anks" isn't so bad, is it?

To be really wild and roguish out at Garden City or Lakin, now, you must take your friend to the oyster parlor or soda fountain. Twenty-five years ago they were delighted with cove oysters, canned, and Arbuckle's coffee in two-pound packages.

Bolton Hall, who wrote "A Little Land and a Living," "Three Acres and Liberty," and other sensible books, has now issued a book about sleep. Ten to one that Bolton said something about "the raveled sleeve of care," in the first chapter.

Members of the hospital board in Kansas City object to Mr. Boyle's impugning the board's motives. The very idea! As if anyone who knows a single thing on earth about the general hospital would dare to cast a stone at the board! What the hospital board in Kansas City needs, and needs very much, is about a month in the general hospital.

ALUMNI NOTES.

Miss Maude Estes, '10, was in Manhattan last week.

Miss Reva Cree, '10, is visiting home folks in Manhattan.

Miss Elsie Baird, an ex-student, was visiting college Saturday.

Miss Hope Palmer, '10, is teaching in the grades at Arkansas City, Kan.

Miss Edna Pugh, '11, was in Manhattan to see the Aggie-Creighton game.

Miss Lucile Forrest, '10, and Miss Clara Peters, '11, were college visitors last Saturday.

Mrs. Mamie (Helder) Halstead, '04, of Hays, Kan., is spending a few days in Manhattan.

Born, November 1, to Mr. and Mrs. Ralph Gallup, of Marysville, Kan., a daughter. Mrs. Gallup was Stella Hawkins, '09.

Miss Irene Taylor, '08, visited college friends last Saturday and Sunday. She is teaching in the Dickinson county high school.

Miss Elizabeth Agnew, '00, spent a day in Manhattan last week. She was on the way to the meetings of the Teachers' Association in Topeka.

Miss Winifred Cowan, '11, saw the Aggie-Creighton cold weather festival last Saturday. Miss Cowan is teaching domestic science in the high school at Holton.

Harry Skinner, '11, visited the college last week. He is teaching agriculture and physics in the Cherokee county high school, and coaching the football team.

Miss Nell Hickok, '11, spent Saturday and Sunday in Manhattan with her sister, Miss Mary Hickok. Miss Nell Hickok is teaching at Chapman.

Ralph W. Edwards, '11, who has been doing experimental work at Garden City, visited the college last week. He was on the way to Washington, D. C., to enter the government service.

Miss Lillian Lowrance, '10, attended the meetings of the State Teachers' Association at Topeka last week and visited at Manhattan over Sunday. She is teaching at Independence, Kan.

F. L. Williams and Kate (Manly) Williams, of South St. Joseph, Mo., announce the birth of a son, Donald. Mr. Williams was a student of the college and Mrs. Williams was graduated with the class of '99.

Miss Matah Schaeffer, now teaching domestic science in the high school at Phillipsburg, Kan., Miss Florence Snell, who is teaching at Effingham, Kan., and Miss Mary Parsons, who is in charge of the culinary department of the Wakeeney, Kan., high school, all alumni, visited the college last week after attending the State Teachers' Association meetings in Topeka. The young women spent Saturday morning in consultation with Miss Frances Brown, of the extension department, and Miss Ula Dow, of the domestic science department of the college.

The Golden Gate Branch of the Kansas State Agricultural College Alumni Association was delightfully entertained at the home of Mr. and Mrs. R. C. Mitchell, 963 Seventh street, Oakland, California, Hallowe'en evening. On arriving the first sign of welcome was a Kansas State Agricultural College lantern shining from the top of the front porch. After being greeted by the host and hostess each one entered into the mysteries of Hallowe'en. The decorations were of mountain foliage, black cats, and witches, lighted by jack-o'-lanterns, Japanese lanterns, and a camp fire in the center of the spacious room. A large straw hat, suggestive of harvest time, filled with fine red apples, reminded us of Kansas, sure enough, and Frank Neal was the first one to find out that they were good. Mrs. Mitchell is a charming entertainer and she kept us busily engaged in many novel contests. One especially showing ability was the ladies' nail-driving contest in which Mrs. Reed easily outclassed all others. We also had our fortunes told, and were treated to the best pop-corn balls and

apples during the evening, and were later served ice-cream and cake.

Everyone thoroughly enjoyed Mr. and Mrs. Mitchell's hospitality. The guests were: M. S. Cole, '01; Mr. and Mrs. A. J. Reed, '03, and daughter Dorothy, and Margaret Reed; L. W. Fielding, '05, and Crete (Spencer) Fielding, '05; R. C. Mitchell, and Mrs. Mitchell; Frank Neal; Mr. and Mrs. W. B. Thurston, '07, and babies; Emma Lane; Marie (Lane) Hollidge; Asa Zimmerman and Allan (Cooper) Zimmerman, '07; Mrs. Mitchell and Miss Moore.

Our enrollment has now reached thirty-eight, and we hope that all Kansas State Agricultural College people who are in the vicinity of San

TRY SHEEP, MR. FARMER.

WITH A LITTLE MANAGEMENT THEY WILL PAY ON ANY FARM.

NOT MUCH EXPENSE IN FEEDING THEM, FOR THEY LIVE ON WEEDS, UNDERBRUSH, AND FORAGE THAT OTHER ANIMALS DON'T LIKE.

A small flock of sheep on any Kansas farm will pay. That has been proved. It requires only a little management, says P. N. Flint, assistant professor of animal husbandry at the Kansas Agricultural College.

Small flocks can be kept in connection with other branches of farming and animal husbandry and probably will give better returns than large

turned into the stubble fields immediately after harvest, except where clover has been sown in the field, and about the last of September lambs can be run into the corn field to clean up the undergrowth. A more profitable way of pasturing sheep is to enclose a number of fields and practice a series of crop rotations, such as: corn, rye, oats, rape, and soy beans. This provides good pasture for the sheep and enriches the soil.

To get a start in sheep raising the selecting of good stock is essential. For the Middle West, the western ewes are better than the native stock. They are uniform in size, age, and condition and are generally free from the internal parasites that native

LEARN TO TALK IN PUBLIC

THE STUDENTS WILL KNOW HOW TO SECOND THE MOTION.

EARNESTNESS AND CONVICTION, NOT ENTERTAINMENT, IS THE PURPOSE OF THE COURSE IN PUBLIC SPEAKING TAUGHT AT THE AGRICULTURAL COLLEGE.

"Gentlemen, I protest most vigorously against this proposed annexation—this taking away of my farm to make more town of it. Would you destroy a fertile garden spot from which comes the very food you eat? Would you cut this fine piece of land into town lots and thereby destroy its innate usefulness forever? Would you, I demand, take away my means for a livelihood? Would you?"

It was just a make-believe irate citizen that stood before a make-believe town council the other day and delivered these "burning" words. The town council was a class in public speaking at the Kansas State Agricultural College, and the indignant man from the suburbs was a member of the class. For the moment the class forgot that it was a much censured lot of aldermen and applauded.

Imagine one lone, young man in the center of a big circle of other young men—and young women, too—a big circle, big enough to make the center man feel like an elephant. If that won't take the bashfulness out of him nothing will. And it does it, too.

AN AMATEUR P. HENRY.

A large room in the new gymnasium is reserved for classes in public speaking this year. It is apart from any other class room, which allows the young P. Henrys to become as incensed as they please and no one is disturbed. The chairs are arranged around the room instead of in the middle. This saves time in going to and from the platform and also allows room for breathing exercises and gesture drills which frequently are given. One hundred and thirty students are taking the course this term, and every one recites daily.

Earnestness and conviction, emphasized by plain words, form the purpose of public speaking as taught at the agricultural college. Students are not taught to be entertainers. Nor does the Beyond-The-Alps-Lies-Italy type of oratory find a place here. The more practicable art of public address is given instead. True, the old standards, such as the Bunker Hill oration and Hamlet, are studied and used for practice work during the first part of the course, but the real aim is to train young men and young women for public speaking as they will need to know it after college. Ease and fluency of speech, essentials much desired, come only after much practice.

TO TALK OF THEIR WORK.

Students in agriculture are trained in the presentation and discussion of agricultural facts before supposed audiences of farmers. Students in engineering, housekeeping, architecture, and other courses, are trained to speak on subject-matter relating to their line of work. Public speaking without preparation—extemporaneous speech—also is taught. Then there is an advanced course which gives training in after-dinner speaking, memorial addresses, debates, and other forms of public addresses for formal occasions.

E. P. Johnston, assistant professor in charge of public speaking, gives the instruction in this course. Professor Johnston is a graduate of Oberlin College and the Emerson School of Oratory. He also is a graduate of the summer school at Chicago University. For three years he was instructor in public speaking in the University of North Dakota. For two years he was a reader under the direction of the Chicago Lyceum Bureau.

HOME HELPS.

An egg beater should never be left to soak in water, as the oil will be washed out of the gears, making it hard to turn.

In baking bread or rolls put a saucepan of boiling water into the oven. The steam will keep the crust smooth and tender.—*Racine Journal*.

THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. 1.

MANHATTAN, KANSAS, SATURDAY, APRIL 24, 1875.

No. 1.

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FORAGE PLANTS IN KANSAS. NO. 1.
BY PROF. E. M. SHELTON.

One of the hopeful signs in Kansas agriculture, is the wide spread interest lately awakened among our farmers in the subject of this article. The growth of grass is a branch of farming that there is little danger in overdoing, for the reason that it rarely exhausts the soil and nearly always is a positive benefit to succeeding crops. This is especially true of alfalfa and the clovers generally, and it is true of all grasses when pastured.

In the brief space of this article it will be impossible to discuss with any degree of thoroughness, even a few of the better known grasses. I only desire to throw out a few suggestive facts concerning the cultivation of forage plants that seem to promise especially well for Kansas.

ALFALFA, OR LUCERNE.

The success which has attended the cultivation of this plant in California, and in various South American countries, gives it a special promise for Kansas. The alfalfa, unlike its near relative the red clover, has a perennial root. The clover plant will last two years, some say three; the alfalfa, with decent treatment, will last ten or twelve years.

Neither in heavy clays nor light sand does the alfalfa flourish best; a mellow loam, or a permeable or even gravelly subsoil delights it most. The fact that the alfalfa sends its straight tap-root to such enormous depths, frequently thirteen feet, makes the question of the subsoil of the utmost importance. With an impervious hardpan or quicksand subsoil, success can hardly be expected with this plant. The ground should be thoroughly prepared for the seed, and free from weed and grass seed. The alfalfa "stools" or tillers less than the clover, and hence requires a more liberal seeding. In California the rule is twenty pounds of clean seed per acre. We certainly should not sow less. Sow the seed at about the same time in the spring that oats and barley are usually sown. It may be seeded with either of these

crops, but does best when sown alone. The pure seed in California costs twenty cents per pound. It may be laid down in Kansas in lots of thirty pounds, at about thirty cents per pound.

TIMOTHY, OR HERDS GRASS, is the most valuable contribution made by America to the agricultural grasses. Indeed it is the most valuable of all the grasses to cut for hay. For pasture it possesses less value, being inferior to clover or blue grass. Timothy promises to be of more than ordinary value to Kansas. Upon the College Farm we have twelve acres which passed through the terrible ordeal of last summer without the least injury. The great difficulty will be in getting the timothy started. Sow in the fall, early in September, upon land duly plowed and harrowed if possible. If not, sow upon stubble land at the rate of about eight quarts per acre. Then harrow thoroughly both ways and if the land is dry roll it, or, what is better, drive a herd of sheep or cattle over the land until it has been thoroughly trodden over. The advantage of sowing timothy in the fall is, that in case of failure, the seeding can be repeated in the spring.

Despite the protracted dry weather of last fall, we have a generally good stand upon seven acres, which was treated substantially as above; some patches that appeared as blanks we re-seeded late in March and have but little fear as to the result.

THE GRASSHOPPER.

BY PROF. J. S. WHITMAN.

THE hateful grasshopper (*Caloptenus spretus*) is hatching in considerable numbers on the south slope of the bluffs near the College. These are principally the offspring of such females as had defective wings, or whose wings became worn or lacerated in their flight. From observations made at the College, it seems that the females, on account of their larger bodies and greater weight, had suffered much more in this way than the males. Fifty specimens taken on the 15th of September last, after the swarm had left, but three were males. The wings of two of these were slightly injured.

Coming from the elevated, gravelly and sandy plains of the West, the females, impelled by instinct, sought the high, gravelly knolls of our prairies as a nidus for their eggs; their offspring will reluctantly descend into the valleys as food may become scarce, but as they are wingless their march will be slow; and, born at less elevation, and living under different atmospheric conditions, they will be much less vigorous than their ancestors; many will become infested with the parasites, common to our native species, and those that survive to develop their wings will scatter in flight, too degenerate to propagate their species. Thus will end this periodical scourge of Kansas. Beyond the destruction of limited grain patches on high prairies, and gardens at the foot of sandy hills, but little damage is apprehended in this part of the State.

The First Industrialist, 36 Years Ago.

Francisco and Oakland will notify A. J. Reed, 5980 Colby street, Oakland, California, of their address as soon as possible so that we may notify them of our New Year's meeting.

LOCAL NOTES.

A Christian Endeavor society was organized last Sunday at Riley by B. F. Hildebrandt and C. O. Levine, students of the college. Riley has a federated church. The experiment is being watched with interest.

Miss Lillian Bailey, Miss Alma Wailes, and O. C. McIntosh, of Republic county, were guests of friends in Manhattan Saturday and Sunday. Mr. McIntosh is a former student. C. A. McIntosh, a student, guided the party about the college.

flocks. They would be less liable to disease and would require less attention.

In every country the domestic sheep has shown its ability to live and give good returns to the owner. Sheep, grazing on land, benefit the land more than any other kind of animals. They lie at night upon the high elevations, so that the fertilizing properties are carried to the lower land by the rain.

THEY'LL EAT WEEDS.

Sheep will eat a greater variety of plants than any other animal, except the goat. They will eat a hundred kinds of weeds that cattle will not touch, and are thus very efficient in ridding land of weeds; and they require less land for pasture.

To the average Kansas farmer a flock of 40 to 50 ewes and one ram undoubtedly would pay. They can be

sheep nearly always have. They may be purchased in most seasons of the year and particularly in the late summer and fall. A pure-bred, registered ram should be obtained. He should be of good size, one or two years old, and should have a well-developed body. By the use of the best rams the standard of the flock is kept up.

The main objections to sheep raising are the diseases that sheep are subject to and the loss from the attacks of dogs and coyotes. Certain parasites, as the tape-worm and the stomach worm, are fatal to lambs, but these diseases are not nearly so destructive as cholera is to hogs. Good wire fences will keep the coyotes from harming the sheep.

To fringe celery cut it in pieces two inches long and cut down into several parts with water to curl.

BAD WHEAT, GOOD FLOUR.

GERMINATION, THESE TESTS SHOWED,
DIDN'T ALWAYS SPOIL BREAD.

An Interesting and Highly Important Chapter in a Comprehensive Bulletin Has Just Been Issued from the Chemistry Department.

Someone said, a long time ago, that germinated wheat would not make good flour. Someone else denied it, and still another gossip said both were wrong: that her husband, a farmer, had sold piles of germinated wheat to a miller who had ground it into flour and sold it to a storekeeper who had sold it to the women who were doing the talking, and both had bragged about their bread. So there. And she was right, to a certain degree, for it has been shown that wheat may undergo germination and still make fairly good flour. At 2 o'clock one afternoon, in July, 1907—more than four years ago—two men took five shallow boxes to the attic of Physical Science Hall. In the boxes they carried several varieties of hard wheat from the crop of 1906. All were similar in chemical composition. All were No. 1 wheats.

INTO THE MILL.

These wheats were submitted to the customary germinating processes. It was noticed that damp, musty wheat, in most cases, soon dried out and regained its former respectability so that a dealer might easily be fooled. The grain was put through a small mill installed by the chemists, Prof. J. T. Willard, dean of science, and C. O. Swanson, assistant chemist. They made their own flour, and baked their bread in an electric oven. Also, they have formed some opinions, all in the interest of the people, and have described their work—and their views—in a comprehensive bulletin of 150 pages, bearing the title, "Milling Tests of Wheat and Baking Tests of Flour." Here is a little list showing the kind of samples they used in their experiment.

No. 0 was the normal, No. 1 wheat. No. 1 was allowed to stay in warm, moist sand for 24 hours. It showed signs of germination. It was thoroughly dried and aired, and seemed like sound wheat.

LIKE GOOD WHEAT.

No. 2 was removed from sand after 48 hours. Many grains showed signs of germination. Same treatment as No. 1, after which it seemed very little different from good wheat.

No. 3 was in the sand 72 hours. Most of seeds germinated. Roots and leaves $\frac{1}{2}$ inch long. After drying these shriveled up and were hardly noticeable.

No. 4 was in the sand 96 hours. Leaves and roots an inch long.

No. 5 was in 120 hours. Roots and leaves 2 inches long, and seeds grown into one mass.

No. 6 was treated same as No. 1, except that no formaldehyde was used to prevent mold, and the seed was more fully germinated.

No. 7 was treated same as No. 1, except that it was dried for two days in a steam oven.

After the wheat had been treated as above, and was thoroughly dried, it was run through the little experimental flour mill, and made into dough, each kind of flour being treated exactly alike. The results were as follows:

No. 0 normal loaf in every way. Texture fine.

THE GLUTEN WAS WEAKER.

No. 1. The dough was of about the right stiffness, not sticky, but lacked smoothness. The texture was good, but was somewhat coarser than normal, showing a weakening of the gluten. In rising and baking, the loaf was normal. The texture of the bread showed a small weakening of the gluten. This was very slight, however.

No. 2. The dough was smoother than No. 1, but somewhat less elastic. The texture of the baked loaf was good, but showed a coarser texture, indicating a further weakening of the gluten. This latter was also indicated by the larger loaf volume.

No. 3. The dough was the right stiffness, but a very rubbery consist-

ency. The dough rose very rapidly. The texture was good, but showed a weaker gluten than No. 2. This fact is also shown by the larger loaf volume.

No. 4. The dough was soft, smooth, and very much like rubber in consistency. It was not at all springy. It would run in the pan. The texture of the loaf was poor. The large holes in the crust and in the crumb showed a very weak gluten. The shape of the loaf indicated a very marked change in the properties of the gluten. No undesirable flavor was apparent in the bread.

THE TEXTURE GOOD.

No. 6. The dough and loaf were normal except that they showed a weakening of the gluten, giving a very large loaf volume. The texture was good.

No. 7. Dough was weak, granular like cake dough. Had not the coherence to be worked in the machine. Rose but little. Loaf was very brittle, and when dry became hard. This shows a more profound change in the gluten than any other.

The chemists make this general summary of the results of their tests:

In general, the baking qualities of these flours, with the exception of 4, 5 and 7, were good, and showed that wheat may have undergone incipient germination and still make fairly good flour. However, it must be remembered that these wheats received the best treatment after the germinating period. It shows, moreover, the power of wheat to withstand unfavorable conditions.

This, however, is no excuse for giving wheat poor treatment. The strength of the flour is weakened by incipient germination. Germination may be carried so far as to destroy the baking qualities of the flour. The losses in scouring are greatly increased and the proportion of flour obtained is decreased.

THE CUBS HAVE A CLUB.

Students in Industrial Journalism Reorganized the "Cub Club" last Friday.

The Cub Club, an organization of the students in industrial journalism, met Friday in Kedzie Hall. A large number of students were present and an enthusiastic meeting was held.

A new secretary, C. G. Wellington, was elected, but all other officers will hold over. The old officers are Roy Davis, president, and Speer Callen, treasurer. A committee was appointed to arrange for a new place of meeting. The club will meet again next Thursday.

But Agriculture Leads All.

Nearly a third of a billion dollars was added to the wealth of the United States from the mineral production of the western states during 1910, according to the figures of the United States Geological Survey.

This includes about 66 million dollars' worth of coal, the remaining production, principally metals, having a value of practically a quarter of a billion dollars. The total figures of western mineral production as compiled by the Survey are \$313,791,000. The area considered includes the belt from the Dakotas south to Texas and the territory westward.

Said Agnes, to Fannie:

Misses Agnes Machac, Tracy Holubic and Fannie Wojtek and Wm. Trlica spent Sunday evening with Miss Stella Bocek.—*Hallettsville (Texas) New Era*.

PLANT A CATALPA GROVE.

BUT SPRING, NOT FALL, IS THE TIME TO SOW SEEDS.

Kansas Growers of These Trees Sell Posts for \$14 to \$20 an Acre, Annually, and the Grove Requires Little Attention.

For a profitable investment why not plant a grove of Hardy Catalpas next spring? For starting trees from seed, spring, not fall, is the better time to plant. April is the month, says C. A. Scott, state forester at the Kansas Agricultural College.

The rapid growth and freedom from attack of injurious insects and fungus make this species especially desirable to grow for posts. Many large catalpa plantations are to be found in southern Iowa and Nebraska and in eastern Kansas. The Yaggy plantation, four miles northwest of Hutchinson, Kan., and the Munger plantation, eight miles north of Eureka, have proved very successful, yielding an annual return of from \$10 to \$20 an acre.

IN 14 YEARS OR SO.

If planted close together, say 3 x 6 feet, the trees should, in 14 or 16 years, give two or three good-sized posts to the tree. If a second crop is desired, the posts should be cut in February or March, since the stump will sprout more vigorously if the tree is cut then. If a second crop is not desired, the best time for cutting is in November or December, as the posts will season then without checking much.

The seasoning of the posts is very important, since it determines their durability. The posts should have plenty of air circulating about them. To obtain this advantage, they should be stacked in ricks, the alternating layers consisting of three and seven posts. Posts stacked in this way require six to nine months to season. When cut in November or December they are ready for use the following summer, but if cut in February or March they will not fully season until the next fall.

DISCOVERED IN 1825.

The durability of catalpa posts was first mentioned by General Harrison in 1825 when he said he had seen catalpa pickets on fences about the old French forts in a fine state of preservation after being exposed to the weather for more than a century. Posts have been known to stand in the ground from 75 to 100 years without showing signs of decay. Some authorities say that the catalpa has no equal for durability, while others place it second only to osage orange and red cedar.

Sometimes complaints arise from farmers who have set posts which lasted only four or five years. On investigation, however, it is always found that the posts were not fully seasoned or that they were cut from diseased wood. It is a safe estimate to say that catalpa posts, free from fungus and well seasoned, will last 25 years.

From a Far Corner.

"Being located here in one of the far corners of the earth," writes Clyde H. Alspaugh, from Waialae, Oahu, Hawaii, "I enjoy very much to hear the news of my old college friends, and so would be very grateful to receive THE KANSAS INDUSTRIALIST." Mr. Alspaugh was a member of the '09 class.

It Was Ionian Morning.

Chapel exercises Friday morning, last week, were conducted by the Ionian Literary Society. Miss Edgerton's piano solo was well received, as was Miss Carr's recitation. The I. Glee Club gave "A Happy Valley," and responded to an encore. This is one of a number of exercises led by student organizations.

Feeding Frozen Beets?

Frozen beets should not be fed to live stock. A small amount may not be injurious, but a large quantity is likely to derange the digestive apparatus. Eating frozen beets has been known to cause abortion.

Coming to the College Next Month?

Don't Forget the Annual

State Farmers' Institute

December 26 to December 30.

Look at this program for the week:

Stock courses and stock judging.

Poultry courses and poultry judging.

Gas engine classes.

Corn courses and corn judging.

Dairy courses and dairy testing.

Cooking and sewing classes and practice.

Ten Big State Conventions

HERE THEY ARE:

Kansas Boys' Corn Contest Association.

Kansas Corn Breeders' Association.

Road Officers' Conference.

Poland-China Breeders' Association.

Duroc-Jersey Breeders' Association.

Berkshire Breeders' Association.

Kansas Draft Horse Breeders' Association.

Kansas State Dairy Association.

Kansas Butter Makers' Association.

Be here the first morning and stay until the last train. You'll enjoy the experience and, incidentally, get what every man needs in this world: The other viewpoint.

And Don't Forget This:

The winter-term Short Courses are to begin January 3, 1912, and run for ten weeks—the chance of a lifetime. A condensed college course in your idle time.

For further information about the State Farmers' Institute address:

Director College Extension, Box G, Manhattan, Kansas.

For information about the short courses write to

H. J. WATERS, President,

Kansas State Agricultural College, Manhattan, Kansas.

THIS GRASS IS A PEST.

"Has Roots Like an Elm," Says a Farmer of the Johnson Perennial.

"The Methodists and Johnson grass are about to take this town. I'm willing to help the Methodists all I can, but the grass surely is the limit. It has roots like an elm and flourishes like a green bay hoss. Can you tell me how to get rid of it without ruining my blue-grass lawn?"

This is the type of letters that the Kansas Agricultural College has been receiving lately in regard to Johnson grass, a pest which is spreading over parts of Kansas and cannot, apparently, be killed.

Johnson grass is a perennial belonging to the sorghum group of the grass family. While the plant is small it closely resembles young cane. Its average height is from three to six feet, and it propagates itself by means of a well-developed system of underground stems and by seed. As the chief means of spreading is by seed, the question of control resolves itself directly into the question of controlling the seed production as well as preventing the perpetuation of the plant by root stalks. The spreading of the grass would be checked, say the experts at the agricultural college, if not allowed to produce seed, and it would also leave the plant in a condition to be easily eradicated. The best method of doing this is by pasturing the grass by root stalks. The spreading of the grass would be checked, say the experts at the agricultural college, if not allowed to produce seed, and it would also leave the plant in a condition to be easily eradicated. The best method of doing this is by pasturing the grass close or by mowing it often.

law pertaining to Johnson grass, the substance of which is:

That it is unlawful to introduce or sell within the state any seed or roots of Johnson grass. It is unlawful to permit the plant to mature seed upon any land. Any person who does so is liable to civil action for damage caused to the surrounding land or crops. It is the duty of the county commissioners to instruct the road overseers of the different districts to prevent the plant from spreading by preventing the seeding of the grass upon the right of ways, roads, and land under his jurisdiction; to investigate any cases of maturing seed and give the owner five days' time in which to destroy it.

The Stock Judgers Are Busy.

L. C. Weckman, Ray Lallin, A. Paterson, R. Dodderidge, Harry Smith, George Kirkpatrick, I. L. Fowler, H. P. Wood, W. Hislop, and Jesse Keeble, accompanied by T. G. Paterson, assistant in animal husbandry, judged Percheron horses at the farm of J. C. Robinson, Towanda, Kan., and Hereford cattle at the farm of R. J. Hazlett, Eldorado, Kan., Wednesday and Thursday. From these students will be chosen the stock-judging team that will go to the International stock show at Chicago next month.

Kinzer Was Here Tuesday.

R. J. Kinzer, formerly professor of animal husbandry at the Kansas State Agricultural College, but now secretary of the American Hereford Breeders' Association, visited the college Tuesday morning. He went to Blue Rapids, Kan., in the afternoon to attend a public sale of Hereford cattle.

THE KANSAS INDUSTRIALIST

Volume 38

Kansas State Agricultural College, Manhattan, Saturday, November 25, 1911

Number 7

CAN HAVE TURKEY, BUT—

TO MAKE THE BIG DINNER INEXPENSIVE THE REST MUST BE SIMPLE.

Allowing \$2.50 for the Turkey, a Dinner for Ten Persons Will Cost About \$4.50.—How to Decorate the Table.

You can afford turkey for your Thanksgiving dinner this year if you keep the rest of the menu simple and inexpensive. The present market price for live turkeys is 14 cents a pound, while dressed fowls are 2½ cents higher. These prices will increase from four to six cents as the feast day draws near. The dry weather, last spring, was exceptionally favorable for young turkeys and, as a result, they are more plentiful this fall than for several years previous.

Thanksgiving is not the time for elaborate courses or new cookery wrinkles. Hot-house vegetables are as out of place on the Thanksgiving menu as turkey would be without cranberry sauce, in the opinion of some persons. And as for dessert, well, anything except pie would be a culinary crime.

This menu may be used with these decorations:

Salpicón
Roast Turkey with Bread Stuffing
Glazed Sweet Potatoes Baked Squash
Creamed Cauliflower Currant Jelly
Pickled Peaches
Oyster Salad
Frozen Cranberries with hot Gingerbread
Pumpkin Pie Cheese
Coffee Nuts
Glazed Sweet Potatoes.—Cook potatoes ten minutes in boiling, salted water, drain, skin, and cut in halves lengthwise, and put in buttered pan. Make a syrup by boiling three minutes one cup sugar and one-half cup water. Add two tablespoonsfuls of butter. Brush potatoes with syrup and bake fifteen minutes, meanwhile basting twice with remaining syrup.

Frozen Cranberries.—One quart cranberries, six cups water, two cups sugar. Cook cranberries in water eight minutes, then force through a sieve. Add sugar and cool. Freeze.

LEARN TO USE MACHINES.

Young Men in this College Study Improved Implements.

Farm machinery, as used to-day, contributes greatly to the efficiency of farm labor. The rapid development



A "Lab" Class Studying Farm Machines.

Here's a menu that conforms to all the traditions of the great American feast day, and, at the present market prices, need not be expensive. With careful planning, and even allowing \$2.50 for a plump, ten-pound turkey, this dinner could be served to ten persons at a cost not exceeding \$4.50. There will be enough "left-overs" to reduce the expense materially.

Roast Turkey	Oyster Dressing
Mashed Potatoes	Cranberry Jelly
Creamed Onions	Corn Pudding
Celery	
Fruit Salad	
Mince Pie	Pumpkin Pie
Coffee	Nuts
And this is the cost:	
Two Pies.....	\$.30
Corn (one can).....	.10
Potatoes (three pounds).....	.06
Cranberries (one quart).....	.13
Celery (one bunch).....	.10
Gelatine (for salad).....	.10
Bananas.....	.10
Oranges.....	.05
Coffee.....	.10
Butter (½ pound).....	.16
Oysters (¼ pint).....	.15
Onions.....	.10
Cream, milk, flour, seasonings.....	.35
Nuts.....	.20
Turkey.....	.25
Total.....	\$4.50

THE PUMPKIN EFFECT.

A pretty table can be made by having a centerpiece of pumpkin blossoms, made from crepe paper, and a tiny pumpkin at each plate for salted nuts. The small pumpkins are made from cardboard and then covered with yellow tissue paper, after padding them, to make them look like pumpkins. The creases are made by drawing heavy yellow embroidery thread tightly around them. They make pretty souvenirs for the guests.

A large pumpkin scooped out, lined with tissue paper and filled with apples, is pretty for the center of the table. Punch may be served on a side table in a glass bowl set in a hollow pumpkin. A long-handled gourd makes an appropriate dipper.

of the great Western Central Plains is credited to the use of modern farm implements.

Classes in farm mechanics at the Kansas Agricultural College become acquainted with the newest improvements in farm implements. At the college is modern farm equipment of all kinds—tillage machinery, harvesting machinery, and machines for pumping and grinding, and, in fact, all the equipment needed to do the mechanical work of the farm. Students learn to operate these machines, how to care for and adjust them, and how to use them the most advantageously on the farm. Short-course students also are given this work.

The increasing use of farm implements is indicated by the increased output. More than 5 million agricultural implements, valued at 146 million dollars, were manufactured in the United States in 1909. This is an increase of 29 per cent in number and 31 per cent in value over the figures of 1904.

The farmers are progressing in their demands, and the manufacturers of implements are constantly changing the types of machines manufactured to suit these demands. The number of horse power threshing machines put out in 1909 was 63 per cent less than in 1904.

Traction power is no more thought of as a joke. While this division of the implement industry is yet in its infancy, the use of traction power on the farm is likely to revolutionize the present system of farm management. Within recent years, intertilage tractors have been made that will plant, cultivate, and harvest a corn crop.

McCormick Spoke for the College.

Dean E. B. McCormick represented the college at the inauguration of George E. Myers as principal of the Kansas Manual Training Normal School, Pittsburg, which ceremonies took place November 17. Dean McCormick made an address.

BLAST OUT THE STUMPS.

IT IS LESS EXPENSIVE AND QUICKER THAN PAYING MEN TO DIG.

Thirty-Eight Cents Worth of Dynamite Under an Obstinate 20-Inch Elm Stub Will Perform a Day's Work in a Second.

For generations farmers have chopped and dug away at stumps which have yielded slowly to their efforts. To-day a quicker and more effective way of getting rid of them is imperative. And such a way has been discovered. It's dynamite. When explosives are used properly, stumps and boulders are not only blasted out of the ground, but are at the same time broken into pieces which can be easily removed and burned, if stumps, or, if boulders, used for building roads.

Only a small outlay is necessary when explosives are used. One man can do the work as well as a dozen. But he must know how. And he must be a careful person.

GROUND SHOULD BE WET.

To blast a stump the charge should be placed as near as possible to the toughest part of the stump, so that it will be hit first and hardest. Generally, this spot will be directly under the middle of the stump. When a very large stump, which is rotten in the middle but has large branch roots, is to be blasted better results will be had if a small charge is placed under each root and fired simultaneously with a blasting machine. To keep the blast from splitting the stump and wasting a part of the force, some blasters wind a stout iron chain around the stump several times. A chain should be used on all hollow stumps.

Better results will be had if blasting is done when the ground is wet. The ground then will offer stronger resistance to the action of dynamite than it does when dry. Thus the stumps can be blasted out with less dynamite, which means less expense.

Blasting explosives are divided into two general classes, known as high explosives and low explosives. Dynamite and low powder are examples of high explosives. Blasting powder is an example of a low explosive.

High explosives can be properly exploded only by a very powerful shock. Such a shock can be made by the use of a detonator, which is inserted in the charge. This detonator is either a blasting cap exploded by a spark, or an electric fuse which is exploded by a fine wire superheated by an electric current.

HANDLE WITH CARE.

Dynamite, of course, must be handled with care, especially when thawing it out. Gloves should be used while handling it. The taste of it will cause violent headaches. It is well to take a little advice from someone who has used dynamite before you attempt to use it.

If there is any uncertainty as to what grade of explosive should be used, a letter to any responsible dynamite manufacturer will get an explanation of the work. If necessary these powder firms will send competent men, at the company's expense, to explain the uses of explosives.

The expense of blasting stumps depends, of course, on the size of the stumps. Eighty elm and oak stumps on an Iowa farm, which averaged 20 inches in diameter, were removed with explosives at a cost of 38 cents apiece.

GENERAL ELECTRIC USES GRADS.

Fourteen Alumni Are Now With the Schenectady Company.

The General Electric Company, of Schenectady, N. Y., employs many graduates of the Kansas State Agricultural College. With this company

now are: George T. Fielding, '03, commercial engineer; H. D. Matthews, '04, switchboard engineer; E. Adamson, '05, switchboard draftsman; L. R. Elder, '06, commercial engineer; L. M. Graham, '06, in the engineering department; F. R. Linsey, '07, designing engineer; G. C. Kahl, '07, commercial engineer; A. S. Salkeld, '09, traveling salesman; Carl Forsberg, '08, traveling salesman; Roy Wilkins, '09, expert on steam turbine test; H. D. Strong, '08, in Dr. Steinmetz' office; George S. Goheen, '08, in Dr. Steinmetz' office; Charles Jacobus, '09, assistant foreman of testing department; C. Q. Ward, '10, switchboard inspector.

BUTCHERING TO BE TAUGHT

Students Will Learn How to Kill and Cure Meat Next Term.

Plans are being drawn by C. H. Chandler, state architect, under the direction of President H. J. Waters of the Kansas Agricultural College, P. N. Flint, assistant professor of animal husbandry, and T. G. Paterson, of the same department, for a slaughter house in which to teach agricultural students how to kill and cure meat.

The ordinary slaughter house is just that and nothing else, but in this case it is to mean, ultimately, much more to farm families, if President Waters' plan succeeds. In this building he intends to have the students learn not only how to kill and cure but how to cut up and care for meats of different kinds, and to clean and smoke those parts best kept in that way. This includes, of course, how to kill and cure pork.

"It should be the beginning of an effort to stop a waste of 5 million dollars a year in farmers' butcher bills," said President Waters. "The farmers of Kansas no longer have hog-killing day or beef killings. There are no beef clubs. There is no co-operation among the farmers in obtaining their meat supply. On the contrary, each sells his live stock to the packers in Kansas City, who turn the animals into meat and ship them back to the farmers in refrigerator cars at an advance of 35 to 50 per cent, and the

FROST MAKES A POISON.

AFTER A FREEZE, FORAGE IS DANGEROUS, SAYS DR. SCHOENLEBER.

Let These Feeds Stand for Two Months and Then Feed Sparingly—Beets, Turnips and Mangels Also Made Harmful by Frost.

"There's danger in feeding immature forage crops which have been frosted," says Dr. F. S. Schoenleber, state veterinarian at the Kansas Agricultural College. "Don't, under any circumstances, allow stock to feed on frosted kafir corn or cane standing in the field. Animals have been known to die within two or three minutes after eating such frozen feed. I would advise cutting the crops that are caught by frost and keeping them for winter feed. It seems that there is almost no danger in feeding this forage after it has seasoned two months or so after the frost."

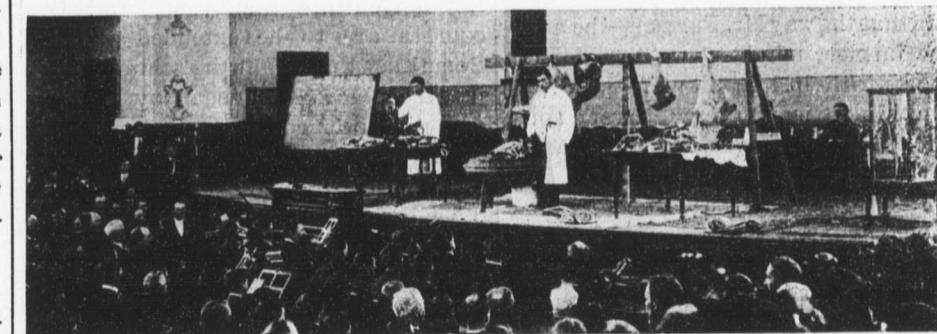
EARLY FROSTS DID IT.

More than the usual number of deaths in Kansas live stock have been recorded this year. This may be explained by the comparatively early frosts which caught much forage still standing. Because of the drought most of this year's forage crops were sown late. Frosts, though later than usual, damaged these crops. There was a shortage of forage on account of the drought, so many farmers were compelled to take the risk and feed the frozen crops.

"Cane and kafir corn doubtless are the most dangerous crops to feed after frost," Doctor Schoenleber says. "But I would name also milo maize, and in fact any forage crop which is not mature at the time of frost. Of course, frosted feed has been fed, many times, and has done no harm.

IT'S A CHEMICAL CHANGE.

"You see all the facts about frozen feed haven't been discovered. We can only advise what to do to be on the safe side. It is supposed that frost causes a chemical change to take place in the juices of these crops and a poisonous substance—prussic acid—is formed. This is one of the most deadly poisons. It causes almost in-



Learning How to Cut Meat.

farmer eats in this way meat that he himself has produced. But once get the farmer to kill and cure his meat—and the equipment costs much less than his meat bill for a year—he is not likely to return to the old method. All these boys we are sending back to the farm should know how to do these things, and they will know them before they are graduated from this college."

The point upon which President Waters has placed especial emphasis in arranging to build the proposed slaughter house, is that the facilities shall be a model for the ordinary farm; the equipment only such as any farmer can afford to buy and should have. The building will be ready for use by the winter term, which begins shortly after Christmas.

Tinted embroidery can be cleaned by rubbing the surface with a piece of bread a day old. Use a small piece with the crust on, and throw away as soon as soiled.—*Racine Journal*.

stant death. In some cases animals suffer only a light attack of poisoning from eating this feed, whether acute or chronic depending on the amount of frosted food that is eaten. The strange thing about it is that some fields of kafir or cane will be poisonous when frozen and others not. The explanation now given is that the stalks in one field may be more juicy at the time of the frost. The more juicy the stalks, the more danger after frost. There's no danger in feeding kafir in the shock which has undergone freezing—that is, if it has had time to stand for a while and dry out before freezing.

"As to feeding frozen beets, turnips, apples, silage, and mangels, to stock, I would advise care in that, too. The results may not be so serious in this, but they are likely to cause indigestion, scours, colic, and bloating. Silage is all right after it has thawed."

THE KANSAS INDUSTRIALIST

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PROF. C. J. DILLON Managing Editor
DR. J. D. WALTERS Local Editor

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SATURDAY, NOVEMBER 25, 1911.

THE FARMER AND HIS ADVISERS.

No man on earth to-day is so much advised, upon every conceivable subject, as is the farmer. And no man, by the same token, needs it more. Also, if it please the court, there are few branches of business—that is what farming should be—few trades, hardly a profession in which advice is so generally resented or so quickly forgotten. Consider, for just a moment, a newspaper office in a city—where the members of the staff might reasonably be expected to be abreast of the times—and what happens when a new book is issued on "How to Make a Newspaper Pay," "How I Became a High-Price Reporter," or "The City Editor and His Worries—Journalism at a Glance—" What happens? Every man on the staff tries to get that book. Every man will read it, from the managing editor to the cubs, looking for some new light on a profession that has led the world in the matter of illumination in dark spots.

Suppose some one invents a new system for some part of carpenters' work; a finer tool for a mechanic; a more comprehensive arrangement of books for certain clerical work. Do these several artisans go right on plodding along in the same narrow rut? They do not. Not on your life. And they don't ridicule the man or woman who chances to have originated a new idea or re-discovered an old one. They use it, and in doing so they increase their income-earning ability, add to their standing as citizens, make their lives easier.

Is that the way Mr. Farmer—the average farmer, mind—views the world's efforts to help him along? Is it? If you think it is, you ought to read some of the idiotic drivel printed in newspapers whose editors would lose time falling down a well—they're so slow—about experts, and how "experts" couldn't grow this or that or the other thing, but that Mr. Farmer—who had never been out of the township and wouldn't stand hitched in front of a book—had grown three times the usual crop, and in a dry year. It is just such maudlin as this from addled-pated yaps that encourages a certain kind of farmer to suppose he knows more than men who have spent a lifetime in actual demonstration work with the knowledge and facilities of science at their command.

But, thank goodness, a new generation is getting the farms. This generation knows that to continue the wasteful methods of the fathers would rob the soil of its last bit of fertility. The sons of 1911 know that the cultivated area can not be much enlarged, that the population of the United States is increasing so amazingly fast that this area cannot much longer feed it unless the yield be very materially augmented. They know that to bring this yield to the desired point they must take advantage of the things that science offers. You don't have to threaten this generation with bodily injury to get it to adopt a new implement and to put it in the shelter afterward. This generation is awake. Find a

community in which new, progressive methods are in use, where the farmers' institute is well attended, where domestic science is taught in the high school, and there is a home economics club—find that community and somewhere in it you'll find a graduate, or a former student from the agricultural college, or you'll find a group of young farmers determined to learn new ways. They don't pull back and snort when an "expert" comes along. They know that in eight cases out of ten the aforesaid expert has callouses on his hands.

All of which is respectfully referred to certain persons who should take to their lean and disappointed hearts something of the spirit of Thanksgiving that a beneficent Ruler has permitted them to burden some unhappy community with their presence. Instead of writing against expert instruction every paper in Christendom should urge it upon every farmer in every issue. And every normal, properly conducted paper does it.

TEACHING AGRICULTURE.

The way Kansas schools are taking up farm study, digging out the scientific facts about soil culture, is one of the healthy signs of the times, says the Hutchinson News.

"It is all well and good for Kansas boys to be taught things about the history of Greece, and it broadens the mind to be given more knowledge about how the equator came to be where it is, and all such geographical and geological data, but the fact can't be pried loose that Kansas is an agricultural state. Some education along arithmetical lines is the thing to have, and it isn't bad for a young farmer boy to know how to parse a sentence or prepare a botany essay, but to come down to the facts, education which tells about oats and hogs and sheep goes a long way in the race for a competence.

"Kansas has droves of enterprises that would be of vast value in some less-valuable communities, like manufacturing and mining and politics, but farming is the thing for most of the young men who grow to manhood in the country districts over the state. The agricultural college at Manhattan is doing a world of good for the young men who go there to secure the information they lack, but the rural schools, which catch the boy when he is worth catching, are putting in a line of farm information that is to make farming worth more to the boys and girls who expect to make their home in the country in the future.

"More than seven thousand of the country schools of Kansas are teaching agriculture this year, and the courses are to be extended to all. Some may think that the school is not just the place to teach a boy to farm or a girl to learn things about garden truck, but it isn't altogether true, for the schools are proving their worth in other lines, and will in an agricultural way as well."

LET US GIVE THANKS.

It doesn't matter very much whether you have a turkey and cranberry sauce and gravy and the other fixings for your Thanksgiving feast, if you forget the source of such good things. To the same degree it is not at all necessary that these gustatory delights shall be a part of your bill for the day; the point is just here: Are you actually thankful for getting through the year properly, or as properly as possible, and are you sincerely grateful for the health and happiness you have? Have you tried to live up to the Golden Rule you talked about, last Thanksgiving Day, when you declared that the next time someone overpaid you in making change you would return it? How about that, Mr. Backslider. That caught you, didn't it?

Well, it is never too late to mend, and it is never too late to offer your thanks for the bounties that have come your way, for the blessings of life, for the joys of living—and we all have a few, even in the newspaper business. Perhaps you have been neglectful in the past about acknowledging that you, alone, are not the whole company.

A Golden Text.

For he shall deliver the needy when he crieth; the poor also, and him that hath no helper.—*Psalm 72:12*.

It may do your hungry heart good, and make you sleep soundly, to get down on your marrow, next Thursday, remember the Pilgrim Fathers, and imagine how much more you have to be thankful for than they—poor travelers—had, in their weary day. Get next to yourself, thaw out, let some of the human in you shine for the good of the dull, old world. Thank the Creator, and do it solemnly, for letting you live.

And if you have a turkey—and all the aforesaid attachments thereunto pertaining, to wit: cranberry *et al*—be especially thankful. It seems that nothing, except food, and plenty of it, arouses real, downright gratitude.

TEA FOR COMPANY "A."

A delightful innovation, very popular in the military department, is the system devised by Lieutenant Harbold of having the cadets as guests at informal teas in the late afternoon. The idea has proved amazingly attractive for the young men and has, with other new arrangements of one sort or another, given a new life to the military work of the college.

Lieutenant Harbold has instituted a

Making a success of such a specialty, a farmer devotes more time and attention to it, which results in a careful study, combined with experience gained through his efforts. To be sure, diversified farming must be practiced to keep up the fertility of the acres, but that is fundamental.

Some farmers living near cities are specializing in dairying, selling the product by the quart to the consumer direct. Other stockmen may have taken up feeding cattle or hogs. Some other man may be rearing sheep or goats. Still another is in the purebred poultry business.

Such a plan necessitates an arrangement of the farm buildings for that purpose. All the farming operations must dovetail into this scheme. Many farmers fail because they haven't a specialty. Many others fail who have special lines but no definite plan of working.

H. Z.

IN ONE HOUSE 70 YEARS.

Mrs. Martha Stuart Elliott, of Boonville, Mo., died a few days ago, aged 86, as reported by the estimable Missouri *Rivalist*. For seventy years she had lived in the one home! Think of that, a few of you who succumb to wanderlust. From the day she entered that house, a bride of 16, she had departed no more until the final summons came that could not be ignored. For more years than many of us are to whimper along the way, this woman did her duty by a home and

The Farmer's Thanksgiving.

BY HELEN M. RICHARDSON.

When all the store is gathered in Of autumn's fruit and grain, And in the erstwhile fertile fields But withered stalks remain; When skies are gray, and leafless trees Like patriarchs shorn of strength and pride Yet who would fain befriend;—

The farmer counts his blessings o'er, If, haply, he has found Requital for the brawn of arm Whereby he tilled the ground. He calls to mind the rosy dawns When forth he fareth his way To stir to life the sleeping sods, And in the ground to lay

The seeds that have enriched the earth With all this bounteous store. To plant to till, to garner in!— The burden that he bore Beneath the summer's blazing sun. In this rich fruitage seems God's answer to unuttered prayers With which all nature teems.

—*The Farm Journal.*

SUNFLOWERS.

Well, it's out: The first story about homemade Christmas presents. Now for the riot.

Senator Curtis is in favor of the underflow in western Kansas. This removes the last obstacle.

"Missouri," says the Emporia *Gazette*, "has put the casters under the harvester trust." Why not "skids?"

Dr. Walter Haines, of Chicago, found the arsenic in the Bissonnette case. Sounds like old times. Was Ludvig in on this, Walter?

To the Wichita papers we have just this to say: We wish Billy Sunday would jump over that pulpit or get away from it. The suspense is fearful.

It might be a good idea not to let the jury see any of the published pictures of Miss Mary Chamberlain, in the "Tar party" case. They surely wouldn't help her any.

B. Clark Hyde should thank his lucky stars he isn't being tried in the court of Justice Coleridge, as Dickman was tried, last July, a year ago. That case took three days.

The United States Commissioner of Labor, Charles P. Neil, has been in Topeka investigating the high cost of living. We hope he called on Mr. Davis before leaving the city.

An Italian section laborer died, a few days ago, near Rifle, Colo., of poisoning. He passed through Chicago a year ago, coming west. Mrs. Vermilya is believed to know something about the case.

Nine-tenths of the men are negative. Someone started a knock on George W. Ogden, a few days ago, and every paper in the state, almost, has printed it. But write a "puff" for George and see where it lands!

A certain paper, which shall be nameless, because its editor is a corking good fellow, remarks gravely, this week, that the state university has arranged to care for the "indignant" sick. How terrible, Willie.

The K. U. football players feared Nebraska would be "rough." Did they expect Nebraska to wear nose glasses, kid gloves, and standing collars, and serve tea between quarters? What now, Ignatius? What now?

The Western School Journal proposes, as a "two minute composition" for pupils, the subject, "Why does cranberry sauce accompany turkey?" We await the reply to this question. It has bothered us for many, many years.

An Atchison man complains because a motor car in Kansas City ran over him twice—the last time as it came back to see if the first blow had done much damage. He ought to be glad he wasn't arrested for blockading the street. They go some up in that town.

The newspapers in Topeka missed the real, heart story in their efforts to tell something mawkish about the couple that had been married seventy years. Why didn't they ask the man how his grocery bill compared, in 1911, with the bills when he and she began their journey?

Much excitement has been occasioned, lately, by the several ways in which kafir corn has been spelled. Is it kafir corn or kafir-corn or Kaffir or Kafir? Shall we use upper or lower case in beginning the word? Or shall we just go ahead growing it without regard to the spelling?

Be Thankful.

TO HAVE bread excite thankfulness, and a drink of water send the heart to God is better than sights for the unattainable. To plow a straight furrow, Monday, or dust a room well, Tuesday, or kiss a bumped forehead, Wednesday, is worth more than the most ecstatic thrill under Sunday eloquence. Spirituality is seeing God in common things and showing God in common tasks.

—MALTIE D. BABCOCK.

In "Thoughts for Everyday Living."

number of new rules and requirements that may strike the younger cadets as somewhat exacting. This view will be changed the longer they are in the college. The discipline, which is an inevitable feature of army life, is, without a doubt, the best thing about it. In the college it is especially necessary. To obey, and to obey promptly and cheerfully; to respect the rights of others; to show proper deference to those entitled to it; to live cleanly lives; to look men squarely in the face; to look straight to the front, in short, the first instruction a boy receives, almost, is the finest kind of training. The boy who goes through it will never again forget to shine his shoes and keep his neck clean. It's a great pity that every boy in the world can't have just such direction.

And isn't it a fine thing to have a commandant who is keenly alive to the possibilities of his job? They don't call it a "job" in the blessed army, but let it go at that. When the Sons of the Soil leave the company's service, now, after two years' pounding, they will know how to make out every paper or document used in the army; they will know how to do about all the work that might fall their way if they had to answer their country's call, and they will—glory be—know how to hold their heads and where to put their feet and hands.

SPECIALIZE IN FARMING.

A farmer's chances for success are multiplied several times if he picks out one special line of farming and hammers on that alone. The string attached to such a plan is this: It must maintain the fertility of the farm, or the homestead is being sold, a wagon load at a time. Did you ever notice the men in your county who are making good? Aren't they men who are specializing in some one phase of agricultural endeavor, in which they are better informed, have more skill, and are more up-to-date, than the average farmer?

family. Day after day and year after year in the same old, beloved spot, with the same dear friends, the unchangeable affection of one good man, she went about her accustomed tasks. Governments and societies give medals of gold and diamonds, and draft complimentary resolutions for men who serve faithfully in positions of trust for a period one-quarter that long. Mrs. Elliott has, for her service, a "Little Green Tent," and a place in the hearts of many that sorrow for her going. Lincoln could have commented fittingly on such loyalty.

INTERNATIONAL SHOW IS NEXT.

The Agricultural College Will Enter a Judging Team and a Show Herd.

The great, world-wide congress of progress in animal breeding and raising—the International Live Stock Exposition—is to be held, this year, December 2 to 9 at the Union Stock Yards, Chicago. Reports from officials of the exposition indicate that the big week show will be just a little larger than ever. It is worth the time and expense required to make the trip if you are interested in live stock. The Kansas State Agricultural College will enter its show herd. Also, a stock-judging team, which has not been chosen yet, will try to win first honors, as it did in the Royal Show at Kansas City.

Pumpkin Conserve.

Allow to each pound of peeled pumpkin three quarters of a pound of granulated sugar. Cut the pumpkin in thin, narrow strips, sprinkle with the sugar and let stand in a preserving kettle overnight, when the sugar will have extracted much juice. Add for every six pounds of peeled pumpkin the juice, pulp and grated yellow rind of six lemons and a quarter pound of green ginger root, washed, scraped, and chopped fine. Cool all together until the consistency of thin marmalade.—*Christian Science Monitor.*

LOCAL NOTES.

The junior class gave a party Friday evening of last week at the Carnegie Public Library.

The college library has just received a copy of the new Encyclopædia Britannica, eleventh edition, 28 volumes.

Dean C. M. Brink has been chosen to act as one of the judges on thought and composition in an oratorical contest at Ottawa University.

The junior mechanical engineering students, accompanied by A. A. Potter, professor of steam and gas engineering, went to Topeka, Monday morning. They visited the Atchison, Topeka & Santa Fé Railway shops, the Capital City Iron Works, the Edison Light Company, the *Topeka Daily Capital*, and the State Capitol.

Miss Grace E. Derby, of Lawrence, Kan., has been appointed reference librarian in the college library. Miss Derby was formerly assistant reference librarian in the University of Illinois, and later librarian of the Western College, Oxford, Ohio. She was a student in the University of Illinois library school.

ALUMNI NOTES.

R. N. Meyer, '05, was a visitor at the college November 17.

Raymond Brink, '08, is teaching mathematics in Moscow, Ida.

Ralph Hunt, '11, who lives near Marysville, Kan., is ill with typhoid.

Miss Louise Spohr, '99, is now assistant superintendent of the city hospital at Moline, Ill.

O. T. York, '11, attended the concert at the college Monday night. He is farming near Dunlap, Kan.

Miss Lucy Hamilton Waters, '94, and Lewis Jasper Dale were married at Le Bonheur, Covelo, Cal., October 18.

P. H. Ross, '02, was a college visitor recently. He is teaching agriculture in the Jewell City, Kan., high school.

Miss Jessie Harrington, a former student, and M. M. Justin, '07, were married Friday, November 17, at the bride's home near Beloit, Kan.

Roy Kilmer, '11, and Miss Gertrude Weber, a former student, were married at Grand Saline, Tex., November 13. Mr. Kilmer was a graduate of the architectural course.

TO BE MUCH DEBATING.

A Triangular Discussion with Oklahoma and Texas to be a Feature.

Big things are planned, this year, for the debaters of the college. The Debating Council is arranging for debates with four colleges and expects to sign all the contracts soon. One of the most interesting of the council's plans—which will mark an era in debating at the Kansas State Agricultural College—is the proposed triangular debate between the agricultural colleges of Texas, Oklahoma, and Kansas. If the contract is signed, and it is expected that it will be, there will be a trip for the teams that go to Texas and Oklahoma.

In order to handle all of these debates it will be necessary to use 12 or 15 intercollegiate debaters. The members of the teams will be selected from those grading highest in the intersociety debates. The method of conducting these contests will be changed so as to allow a greater number of the contestants to be selected for the intercollegiate debates.

It means something to be a debater now. Every man or woman that takes part in an intercollegiate contest will be allowed one four-hour credit on his college work, will receive the official K by the college, and will be eligible to join the Forum, which is an organization of the debaters and orators of the college. Those who take part in the intersociety contest will also be allowed to join the Forum.

The members of all of the literary societies are working hard preparing for the coming contests. It is the ambition of every society to put as many debaters on the college teams as possi-

ble. This year they will have greater opportunities than ever.

The Debating Council meets every week. Its officers are: President, Floyd Nichols; vice-president, Waldo Grimes; treasurer, Roy Gwin.

NEW OFFICERS NAMED.

The Military Department Announces the Promotions for this Year.

The military department has made several changes this year under the direction of Lieutenant Harbold. The insignia of rank has been changed to that used at West Point. And hereafter a written military report will be required of officers at intervals. The rules governing the conduct of the cadets are more strict than last year, all of which will increase the efficiency of the corps.

The following officers have been appointed for the fall term: Cadet captains: R. W. Getty, C. F. Turner, H. L. Cole, J. C. Jones, C. A. Leach; cadet adjutant, Frank Buzard; cadet quartermaster, Ned Smith; cadet lieutenants: L. E. Hutto, W. D. Moore, N. H. Davis, J. D. Colt; cadet sergeant major, B. F. Butler; cadet quartermaster sergeant, L. L. Horr; cadet first sergeants: H. G. Avery, A. P. Immenschuh, James W. Linn, A. C. Townsend, W. A. Sutton.

Cadet sergeants: F. A. Coffman, Ernest Doryland (color bearer), P. E. Jackson, R. T. Wilson (color bearer), C. O. Johnson, C. Gilmore, Graydon Tillbury, S. A. Blackman, F. C. Cross, F. A. Schull, H. M. Fellows, H. B. Allen, W. M. Lathrop, H. R. Joslin, C. O. Levine, Arthur Whitset, F. F. Rees, J. M. Goodwin, F. Moore, H. B. Brown, J. D. Hungerford, F. Durett.

Cadet corporals: G. D. M. Jones, F. R. How, L. J. Bush, B. Taylor, F. E. Hartzler, J. H. Loomis, G. Gray, O. N. Lon, L. I. Collins, Charles Slantz, W. D. Brigham, Russell Williamson, E. A. O'Brien, L. A. O'Brien, Raymond S. Orr, A. E. Jones, H. H. Wilson, W. N. Freeman, J. O'Connell, P. L. Mize, M. Stephens, C. E. May, B. Scalpina, J. C. Gist, G. F. Haas, W. S. Acton, L. B. Robinson, W. D. Smith, C. P. Lillard, H. F. Tagge.

WILL DEBATE WITH FAIRMOUNT.

And this Year Two Teams Will Represent the Agricultural College.

The Debating Council met last week and accepted contracts renewing debating relations with Fairmount College. A signed contract with Salina Wesleyan College also has been received.

The increase in the number of debates will necessitate at least two teams this year. The council is working on a new plan that will result in the selection of a larger number of college debaters than heretofore, there being twice as many places to fill.

A Swatting Through the Press.

"We, the members of the Canajoharie Cornet Band, wish to resent the intended insult of Friday evening when we were giving a concert on the Hotel Wagner balcony. Some smart aleck, inspired by others, whom we think we know, placed a lemon on a string and dropped it in front of the band when a selection was being rendered. For this act we have decided not to give any more concerts on the Wagner balcony, and to the man or men who inspired the insult we desire to express our supreme contempt."—*Tioga County (N. Y.) Herald*.

The Forum Held a Debate.

The Forum met Wednesday of last week and put on a very interesting debate. Lee Gould and Miss Mary Williams won from Miss Alma Levenson and Carl Brees. This debate was one of a series planned by this organization.

The Forum is composed exclusively of society debaters and orators, and its chief aim is to boost oratory and debate.

"Many a man who is calling loudly for justice would be in the county jail if he got it."

PLAN EVERY DAY'S WORK

HAVE A SYSTEM, BUT DON'T WASH ON A RAINY MONDAY.

Do the Heavier Work—Washing, Ironing, and Sweeping—in the Morning and Keep the Afternoons for Sewing, Mending, and Recreation.

Use your brains in your housekeeping. Fully one-half the drudgery of housework can be avoided if housewives will devote a little time and forethought to planning carefully each day's work.

Decide, every morning, the things which must be done and those which can be left undone. Many nervous, broken-down women owe their ill health to their inability to distinguish between the essentials and the non-essentials of household tasks.

HAVE AN ORDER OF THINGS.

Have a definite order of things for the day's or the week's work. But such an arrangement must be elastic enough to permit of changing when occasion requires. Don't wash on a rainy Monday just because that is your regular wash day.

Arrange your work so that all the heavy tasks, such as washing, iron-

Olive oil can take the place of butter. Sometimes it may be used more advantageously than butter, for it can be kept in good condition much longer. It is no more expensive than butter, if butter is bought in small quantities.

Buy olive oil by the quart. It costs from 45 cents up. It can be kept perfectly if it is well covered. Keep a clean, white cloth or two layers of clean white paper tied over the top of the can when not using, to keep out dust. Renew these when soiled, and keep the can in a tin box with other supplies in a cool place. In opening it for use, make two tiny perforations in the tin cover in two opposite corners—one for pouring and one for air.

To those who have cultivated a taste for olive oil it is indispensable. Breakfast dishes which every one tires of, such as eggs boiled, scrambled or poached, are improved by a little olive oil. Shirred eggs are made by heating a French cooking plate—brown and white earthenware. Then pour in a teaspoonful of olive oil, and when smoking drop in two eggs as for frying, letting them cook only on one side. Sprinkle with salt and paprika and it's ready to eat.

Some fruits, such as apples and bananas, when fried in olive oil will withhold their flavor better than if fried in butter. Soups are highly palatable with a dash of it. Mushrooms may be sautéed in it. Meats are made more tender if moistened with the oil before cooking.

The most common use of olive oil and probably the most palatable use is in making dressings for fresh salads.

MUSTN'T YAWN NOW, CADETS.

The New System of Demeriting for Misbehavior in Ranks is Strict.

Attention, cadets! Did you see that new system of demeriting posted in the military department's bulletin board? If you haven't read it you'd better stop, the next time you go through Anderson Hall.

There are four classes of demerits. A violation of Rule 1 gives the guilty person fifteen demerits; Rule 2, five demerits; Rule 3, two demerits; Rule 4, one demerit. If a junior or senior receives twenty-five demerits in one term he receives an "F" in drill and may be recommended for dismissal from the college. Sophomores are allowed thirty-five demerits and freshmen fifty. These rules cover such points as proper dress and behavior in lines, yawning in lines, spitting while in the line, tardiness in coming to drill, and similar misdemeanors which affect the discipline of a good cadet corps.

WOMAN HAS MAN'S JOB.

Miss Cora Thackrey, '98, Drives Over Nebraska's Largest County.

The county superintendent of schools in Cherry county, Nebraska, has 165 schools to look after. The county is larger than Rhode Island. The present superintendent is Miss Cora Thackrey, who was graduated from the Kansas State Agricultural College in 1898.

The superintendent's position in that county is considered arduous even for a man. Many long drives must be made. Miss Thackrey drove 250 miles in seven days in a recent trip. But only twelve schools could be visited on that long drive. No county superintendent has ever made the round of all the schools in one season. Miss Thackrey was reelected recently, as was another woman, the county treasurer.

Cookbook Glass.

A small pane of glass, the edges protected by passe partout binding, is a simple contrivance for saving the pages of the cookbook, says the *Newark News*. The book opened to the recipe which is being followed, place the glass over the page. The recipe may be read as easily as without the covering. The page is protected from soiled fingers, and the glass acts, too, as a paper weight in preventing the leaves being turned by a whiff of air.

USE THE DIKE—WALKER.

MILLIONS OF ACRES IN EASTERN KANSAS COULD BE RECLAIMED.

But Co-operation Among Farmers and Corporations is Absolutely Necessary in Saving These Lands, an Expert Tells a Congress.

"Millions of acres of rich agricultural land in Kansas are unprofitably cultivated, annually, because they are too wet," said H. B. Walker, drainage engineer with the Kansas Agricultural College, before the Trans-Mississippi Commercial Congress, last week, in Kansas City.

"A large percentage of this area is overflow land. The fertility of such river valleys as the Kaw, the Marais des Cygnes, Neosho, Cottonwood, Blue and others of Kansas is unsurpassed. These valleys have been accumulating their fertility for centuries, yet their fullest development has been greatly retarded by frequent, periodic overflows. The flood of 1904 in the Neosho Valley alone caused a loss that has been conservatively estimated as being over \$1,200,000. The floods in the other valleys have been equally destructive. Cities, railroad corporations and farmers have suffered alike.

"These conditions can only be overcome by systematic improvement of our river and creek channels. In order to accomplish this the channels should first be cleaned and straightened and then kept in reasonable bounds by the use of the dike or levee. The fact that these large streams drain watersheds of considerable area makes the problem a very complicated one. The efforts of a single individual toward permanent stream improvement are useless and unavailing. There must be systematic co-operation. Drainage districts of large size should be formed for the cleaning and straightening of the channels. Afterwards districts of smaller units can be formed for carrying out the levee work.

"The magnitude of the undertaking, with all its necessary legal proceedings, seems to discourage the landowner and he hesitates to co-operate. The result is many landowners, rather than attempt co-operation, are spending large sums of money for individual protection. The work is carried out unsystematically, without regard to public interest, and when completed remains a stumbling block in the way of greater future development. If proper organization could be accomplished our river channels could be cleaned and made to carry from 10 to 40 per cent more water at a very low cost per acre.

"Outside of the overflow districts in Kansas there are large areas of low, swampy and seepy land that require artificial drainage. Such land can be made productive by tile drainage. In fact, a large amount of this work is being carried on at the present time. It has been quite generally demonstrated all over the eastern part of the state that tile drainage not only removes excessive moisture during wet weather, but retains more moisture in the soil during periods of drought."

WHY THE MILK SOURS.

Leaving it in a Warm Kitchen Helps, for one Thing.

Don't blame the creamery or the milk man if your milk sours too soon. It's very likely your own fault. Most persons know how to take care of milk and cream, but often they are careless and then accuse the milk man.

Cream or milk, if properly handled and kept at a temperature of 50 degrees, should keep sweet for three days. But if you take the cream from a cool place and let it stand in a hot kitchen for a while before returning it, you'll find that it will sour in a short time.

Don't mix cream of different ages, as the mixture is likely to sour in a few hours. Above everything else, keep your refrigerator and milk utensils clean. And always keep the milk and cream in a cool place—at least 50 degrees.

FIRE KILLED THE BUGS.

BURNING INFESTED GRASS MADE NEARLY \$1000 FOR A FARMER.

Dr. Headlee and His Assistants Have Discovered That These Insects Establish Winter Quarters in Bunch Grass and Big Blue Stem.

Burn the bunch grass and big blue stem. Do it now if you expect to kill the chinch bugs and save next year's crops. Fire killed 98 per cent of the bugs, last winter, in one part of the state—fire and the following cold weather.

The value of this treatment has been proved. A rectangular area of 17½ square miles of farm land in northern Sumner county was burned over last fall and winter. The crops harvested on the burned area last summer—1911—showed marked improvement over those in the surrounding territory. A. E. Berry, a farmer in the burned district, says that destroying the chinch-bug-infested grass made him nearly \$1000. In the 17½ square miles a saving of about \$7000 on the wheat alone must be attributed to this burning. That is more than it cost the state to carry on all its bug investigations, otherwise known as entomological research. The burning was done under the direction of Dr. T. J. Headlee, head of the department of entomology in the Kansas Agricultural College.

THE BUGS AT HOME.

Doctor Headlee and his assistants have learned that the bugs establish winter quarters in clumps of bunch grass and patches of big blue stem. Bunch grass is seen as a feature in every part of the state infested with chinch bugs. It was learned, also, that while some bugs sought winter shelter in weeds and piles of rubbish and crevices of some sort, practically every one thus protected perished before spring. So the bunch grass was burned. Although the burning in Sumner county was not all so close as it should have been, leaving stubble in some places one and one-half inches high, where it should not have been more than one inch, this treatment, with the rigors of winter, destroyed about 98 per cent of the chinch bugs.

Throughout the last summer the bugs on the unburned area have ranged from six to twenty times as numerous as those on the burned section. Wheat on the burned area averaged 2.1 bushels, worth \$2 more an acre, and the oats, which were only slightly infested with bugs, yielded a little less than one bushel an acre more on the burned than on the unburned ground. Corn fields adjacent to fields of small grain in the burned districts had no corn suckled dry and killed at harvest time, while corn fields in the unburned territory showed from one to forty rows ruined. The farmers of that district and Doctor Headlee declare the burning did not lower the yield of native grass in meadows or pastures.

HERE ARE THE NAMES.

Here are the names of farmers in Sumner and Ellis counties who helped in the burning, last fall: L. F. Alloway, A. E. Berry, John Beal, Charles Boylan, Link Clark, Henry Dudley, Jesse Duncan, H. E. Ewing, James Grier, Orla Halsey, M. E. Hemphill, J. S. Hedrick, Lewis Hobson, J. A. Jenkins, Ed. Lange, David Little, John Marshall, Isaac Mayfield, H. C. Porter, Ed. Small, C. A. Stitt, Thad Wamsley, N. N. White, A. A. Wise, Fred J. Wolfe, Thol. Wolfe, Argus Lund, John Crabill, Jeff Rinehart, L. E. Allyn, T. L. Ellis, and John Gould.

WHEN TO PLANT APPLES.

Fall or Spring, with the Reasons for Both, and Some Good Advice.

Apple trees may be planted either in the fall or spring. Everything considered, spring planting is the better. The men who favor fall planting say there is no loss of vitality in the trees from keeping them in the nursery storage during the winter. Also that the roots become better established and calloused and the tree will start growing earlier in the spring than the

trees planted in the spring. In the fall, the nurseries have a larger supply of trees; consequently, the purchaser will have a better chance to choose good stock. There will be a saving of time, labor and money, in some localities, if the trees are planted late in the fall when most of the fall work is over.

The difficulty of getting good stock in the spring can be overcome by purchasing the trees in the fall and burying them, completely, near the place they are to be planted. This, also, eliminates any possible danger of the loss of vitality in the nursery storehouse. The only objection to this method is that there is a slight chance that the trees may be dug before the wood is thoroughly mature, thereby lowering the vitality of the trees.

If the trees are planted the last of February or the first of March, when there is not much work on the farm, the cost of setting the trees is no greater than when fall planting is followed. However, if the ground is frozen late in the spring, the trees cannot be placed in the orchard very early.

Fall-planted apple trees may be injured by the weather conditions in the winter, although there is not much danger in this part of the United States.

CAREFUL ABOUT THE WHEAT.

Don't Use it for Pasture When the Ground is Wet.

The advisability of pasturing winter wheat depends almost entirely upon the season, say the experts at the Kansas Agricultural College.

Wheat should not be pastured too late in the spring, or when the soil is wet, especially clay soils. It should not be pastured when the soil is very dry and loose, as blowing often will follow or the wheat may be pulled out of the ground. And pasturing too close must be avoided. When the leaves are cropped off close the plant's ability to manufacture its food is gone.

To determine, partly, the effects of late pasturing, the Kansas Agricultural College mowed, last spring, an acre of wheat growing upon low, rich ground.

The weather following was very dry and the yield was about half of that which was not mowed. If there had been sufficient moisture after the cutting, the difference in the yield probably would not have been so great.

To obtain the most pasture from wheat, it must be sown early in the fall. Usually this is not the best seeding time to secure a large yield of grain. If pasturing is judiciously practiced, in favorable weather, the slight reduction in the yield due to it will be many times returned in the value of the feed furnished by pasturing.

HEAT MAKES HENS DELICATE.

But that Doesn't Mean a Cold Poultry House is All Right.

A heated chicken house is a bad thing for poultry. Too many owners have tried to increase their egg supply in this way and failed. Cold weather will not hurt healthy chickens if their bodies are not damp or they do not have to stand in snow. Protect them from inclement weather, to be sure, but you must not let your sympathy go too far.

"In the first place," says T. E. Schreiner, poultryman at the Kansas Agricultural College, "when poultry is placed in heated houses the health of the birds is affected, and that means a loss of egg production. The hens become delicate and susceptible to disease when kept in a house that is very warm.

"Hot air or steam heat is a needless expense and stoves are dangerous, even if they were of use. Nature has protected grown fowls against cold rather than heat and they need a dry place more than warmth. Have a house enclosed on three sides and open on the south. It is best to cover the open side with a poultry netting of fine mesh. This will give good circulation of air. But a drop curtain of canvas should be hung over this south side and lowered at night and on cold days."

FOR EGGS AND FRY'S, \$140.

THAT'S WHAT A WOMAN MADE WITH ONLY A SMALL FLOCK.

Mrs. T. B. Shulsky Kept 50 Hens Last Year, Had Plenty of Meat and Eggs for Her Table, and Made a Profit, too.

In a farmers' institute at Denton, Kan., November 10, Mrs. T. B. Shulsky, a farmer's wife, read an interesting paper on the subject, "Poultry on the Farm." The experiences of Mrs. Shulsky in making a small flock of hens pay were told in this paper, a part of which is here printed. Mrs. Shulsky said:

"Personally, I am not prepared to say that Plymouth Rocks are any better than other varieties, for I have had no experience with others. But I do know that I like my Barred Plymouth Rocks. Having a curiosity to know just what the income from a small flock would amount to, I kept an account of the proceeds from my flock composed of 50 pure-bred Barred Plymouth Rock hens. Last year I sold \$42 worth of eggs and \$98 worth of chickens. This was outside of home consumption, and I assure you we are not stingy in the use of either eggs or chickens for the table. That was \$2.90 a hen, which is pretty good wages for a little animal. And I have all the hens left and working good this year. No doubt the amount of eggs and meat we ate would balance the cost of the feed.

IT'S IN THE CARE.

"But because 50 hens produced that amount is no reason that 100 hens will produce twice as much, however contrary that may be to the old rule of mathematics. It all depends on the conditions. Where the labor of raising the poultry falls to the farmer's wife, as it usually does, it must be remembered that her diversified duties will allow her only a little time every day to care for poultry. And a small flock, well taken care of, will bring in more profits than a large flock with little attention."

The average farmer, if he considers poultry raising at all, Mrs. Shulsky said, does not look upon it as a means of adding to the general revenues of the farm. Very few give it any consideration, viewing it as a vain illusion, as regards an occupation, or as a hobby for some city crank to exploit. Also, it might be a harmless pastime for his wife. And to some farmers a flock of poultry is a special form of punishment meted out to them, the annoyance and the amount of grain consumed being nothing short of robbery.

Any one who will take the trouble to investigate a little, she said, will discover that poultry in this country comes near being the whole thing, considering the amount invested and the labor involved. The products of the American hen aggregate 620 million dollars annually. And Kansas is one of the four largest poultry-producing states in the Union. The value of poultry on the farm as insect scavengers, as a means of saving waste grain, and as a fertilizing agent, is not to be underestimated.

GROWING MORE PURE-BREDS.

Farmers gradually are learning the advantages of raising pure-bred poultry, Mrs. Shulsky said. The owner of a flock of pure breeds has an advantage over the owner of scrubs in the price he obtains for them during the incubation season. It costs no more to raise a bunch of pure-bred fowls—food, labor, and shelter considered—than it does to raise scrubs, and undoubtedly the blooded fowls make more pleasure as well as profit for the owner.

It is an oft recurring question as to what breed is best for the farm. There is no one breed of chickens that possesses every superior quality, so that the best breed to start with is the one that meets the requirements desired. If the demand for eggs is greater than the demand for meat, then a laying strain, such as the Leghorns, should be chosen. The Leghorn hen is to the poultry business what the Jersey cow is to the dairy business. No farmer

THE Wasted Days

of winter could be made to pay big dividends if rightly used.

The Way Out

May be found in the Farmers' Short Courses to begin January 3, 1912. They continue for ten weeks—weeks that, ordinarily, you idle away—and give you, if you take advantage of the chance, A CONDENSED COLLEGE COURSE. :: :: :: :: ::

In the Winter Short Courses

You can study the things that are of extraordinary importance to you. The work is arranged especially for you. You have your own classes, your own hours for laboratory work—that's the practice period—and you take back home a lot of information that might not have come your way in a lifetime. :: :: ::

Remember the Date: January 3.

Incidentally:

Don't forget to attend the Annual State Farmers' Institute this year. It is to begin December 26—the day after Christmas—and close the night of December 30. Home for New Year's Day. The Director of College Extension, Box G, has charge of this feature. ::

For Information About the Short Courses Write:

H. J. WATERS, President,

Kansas State Agricultural College
Manhattan, Kansas, Box Q.

would think of raising Jersey cattle for the beef market. Just so with the Leghorn. It has neither the size, weight, nor quality suitable for table use.

On the other hand, in raising the larger breeds, like Brahmans or Wyandottes, more meat and fewer eggs are produced. According to the Standard of Perfection, the Plymouth Rock chicken, whether of the white, buff or barred variety, is considered the most popular as a general-purpose fowl, its medium size, hardy growth, and good laying qualities making it a fowl suitable for the farm.

The Gamble Party Pleased.

The concert given by the Ernest Gamble Concert Party last Monday evening was very pleasing. It is hard to say which one of the three artists—Ernest Gamble, basso-cantante, Verna Page, violiniste, or Edwin Shonert, pianist—was the best. They were all encored, and encored heartily. Probably Miss Page made the biggest "hit" when she played "Annie Laurie" for one of her encores. The program was classical, but not too much so. But it was decidedly too short, many thought, though it lasted an hour and a half.

Sophomores in Dramatic Club.

Hereafter, sophomores at the agricultural college will be admitted to membership in the Dramatic Club after a tryout by the department of public speaking. That was decided when the club met Wednesday of last week and adopted a new constitution.

TO HATCH A MILLION CHICKS.

A Community Incubator is the Suggestion of a K. S. A. C. Alumnus.

A million-egg incubator is proposed by Milo Hastings, an alumnus of the Kansas State Agricultural College,

class of 1906. He would make this mammoth machine a public hatchery. It could be owned by a community or by individuals. A small charge for exchanging an egg for a chick would make the profits.

Economy, says Mr. Hastings, is the advantage of so large an incubator. The difference in cost of construction between a large incubator and enough small ones to hatch a million chickens is nearly \$195,000. Then the cost of operation would be about one-twentieth that of operating all the small incubators. This estimate is based upon figures by Mr. Hastings, who built and operated a 15,000 egg machine on the poultry farm of Walter B. Davis, in New York.

More chickens, and healthier ones, could be hatched for this reason. The undertaking would be so large that the employment of an expert who could give his whole time to the work would be justified.

But where get the million eggs? They could be furnished by the surrounding neighborhood, says Mr. Hastings. It is asserted that farmers would not ship their eggs to a cold storage if they could be exchanged for chicks.

Mr. Hastings is trying to interest a number of Kansas communities in his project.

THEY SHUCKED HIS CORN.

These Neighbors Did a Kindly Act for a Sick Farmer.

William Teft, a farmer of near Brown's Spur, below Turon, has been bedfast for several weeks with typhoid fever, and unable to gather his crops.

His neighbors gathered at his place yesterday and had a shucking bee. About thirty of them spent the day, and when they had finished Mr. Teft's crop was in the crib. All took lunches with them and enjoyed a picnic dinner.

THE KANSAS INDUSTRIALIST

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Number 8

FRUIT MEN MUST UNITE.

COOPERATION MEANS LARGER PROFITS, SAYS ALBERT DICKENS.

Fruit Growers Near Wathena, Kan., Have a Successful Combine in Operation—A Manager is Hired to Find Markets for Members.

Cooperation in the marketing of fruit is of great value to the producers. Fruit growers are beginning to realize that the one-man association is not effective enough. Cooperation not only increases the average price to the grower, but also reduces the price to the consumer, because the product can be put on the market cheaper.

The benefits to be derived from a fruit growers' association are: Being able to ship in profitable quantities; distribution of the crop, establishing

shipping place, your number is placed on the barrel, and if the truck proves to be in poor condition your number is referred to and you must be responsible. This helps to make a high standard and to establish a brand for the association."

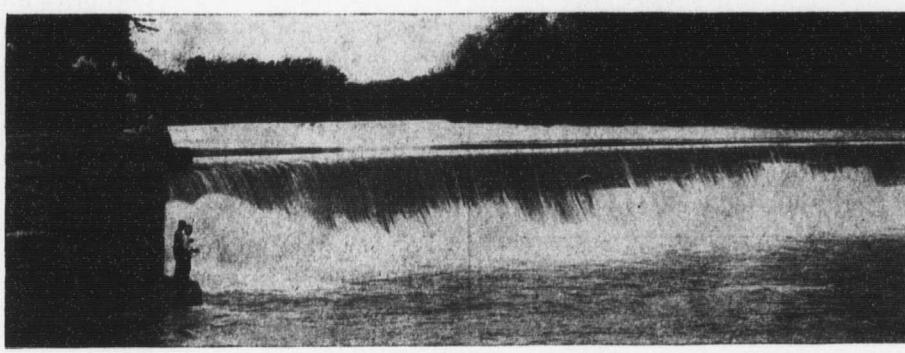
Woodwork Finish.

In refinishing your worn woodwork this spring, and at the same time retaining the grain of the wood, rub it all over carefully with a cloth dampened with ammonia.—*Denver Times*.

WATER MAKES POWER.

Students Study an Engineering Feat Near the Agricultural College.

Many persons visit the power dam at Rocky Ford, on the Blue river, four miles north of Manhattan. The capacity of the plant, provided the



How the Blue river makes light for Manhattan.

a brand, and bringing about better business methods among fruit growers. Since the perfection of the California Fruit Growers' Exchange the output has increased from a few hundred to 50,000 cars.

ECONOMY THE OBJECT.

"The object of a fruit growers' association," says Albert Dickens, professor of horticulture at the Kansas Agricultural College, "is to get the product from the producer to the buyer economically. Good farmers are not always good business men. For example, take a number of men with fifty crates of strawberries. Probably there will be a glut on the home market, while in some other place there is a great demand. The individual grower has a very small chance of locating this market, and as a result he probably sells his strawberries at a loss.

"The fruit growers' exchange meets and elects its own officers. It has a manager whose business it is to locate the markets. He receives telegraphic reports daily from all over the country concerning the prices and demand for certain products. The grower hauls his truck to the central packing house, where it is sorted and packed, and credit is given him for his load. If the market is over supplied in Denver and there is a demand in Kansas City, the manager sends the product to Kansas City instead of to the glutted market at Denver, where it probably would have to be sold for a low price.

"The manager does not send all his cars to the same place, as there would be danger of 'bursting' the market. He distributes them over the market areas.

THE WATHENA WAY.

"One of the successful organizations of this kind in Kansas is the Wathena association in Doniphan county. In one year it shipped 1000 cars of apples, 500 cars of strawberries, 35 cars of grapes, and 300 cars of blackberries and raspberries.

"Barrels and crates can be obtained much cheaper by buying them 'knocked-down' and employing a cooper to set them up. An association could keep a cooper busy nearly all the year. These barrels can be set up and stored until the season opens. If you pack the fruit yourself and send it to the

river is not too low, is about 1450 horsepower. Less than one-half of this power is used at present. Manhattan streets and homes and its business houses are lighted by current generated at this dam. A Junction City corporation owns the dam.

The engineers at the college have studied its construction with considerable interest. Students have visited the dam to watch actual engineering operations. But more than anything else, it has served as an example of what one little stream may do if properly controlled. For years the engineering department of the agricultural college has urged farmers and other landowners to build dams and use the wasted power of streams that now meander aimlessly and uselessly across many fine counties. Some of these streams carry enough power to turn every wheel on a big farm, enough to generate light for the whole property, and often more than sufficient to light a town.

KEEP CHILDREN IN SCHOOL.

Professor Holton, in the Science Club, Will Tell How to do it.

The biggest educational question before the people of this country today is "How can the children be kept in school until adequately prepared for life?"

Seventy-five per cent of all children entering the grades drop out before completing a common school education. Eighty-four per cent of all pupils graduating from the common schools go no further. Ninety-five per cent of all students entering the high school drop out before finishing. Many methods by means of which the child may be retained and given the training so necessary to later life have been suggested, but all, thus far, have been shown to be either impracticable or worthless.

The most recent and promising of all means to this end is the plan of vocational education. Prof. E. L. Holton, of the department of rural education, will discuss this living question before the Science Club, Monday, December 4, at 7:30 p. m. in Room 27 of the Physical Science building. All desiring to keep abreast the times in these matters should not fail to hear Professor Holton.

FIX THE KITCHEN FIRST.

IF THAT ROOM ISN'T WELL EQUIPPED THE WOMEN SUFFER.

Here's a Little List it Will be Well to Let Father Study When he Sells his Wheat—Maybe, Perhaps.

It doesn't matter, much, how rich you are or how artistic, if you start to improve your home you would better spend your first money in the kitchen. That's where the work begins.

No matter how many handy, little devices there are there, it must be a comfortable place, and the greatest source of discomfort in the average kitchen is the roaring coal or wood stove. The cook stove, ordinarily, is supposed to serve three purposes: It must furnish sufficient heat to do all the cooking; it must furnish plenty of hot water to the kitchen sink and the bath room at all hours, and in winter heat the kitchen, the last of which it does in summer as well as in the winter. Cooking with denatured alcohol during the hot months and having a small laundry stove in the cellar to heat the water seems to be the best solution of this problem. By having just a small fire in the range, just enough to take the chill out of the room, alcohol may be used for cooking right through the winter.

THE FIRELESS COOKER.

Instructors in the domestic science department of the Kansas Agricultural College have given much attention to the matter of conveniences.

In the fore front, doubtless, is the fireless cooker. It is one of the articles which should rank near the first in the average kitchen. Its use cuts the work of the kitchen in two. A little fire early in the morning is all that is necessary. While there are many good cookers on the market, one can be made at home which for all practical purposes will be just as good as the other. All that is needed is an old bucket, wooden or steel, or a strong, heavy box, a little excelsior, some asbestos and cloth. Pack the excelsior around the edge of the box and cover this with the asbestos. Take the vessel or vessels which you intend to use for the cooker and pack excelsior and asbestos around them in the center of the box. Make a lid by padding a heavy board with excelsior, and the cooker is ready.

PURE WATER, TOO.

One of the standard kitchen cabinets is almost invaluable to the tired housekeeper, for it concentrates in a space of 40 or 50 inches all the kitchen utensils.

Pure drinking water is of vital importance. Every city and town guards its water supply to the best of its ability against contamination. Why then should a farmer be negligent in this matter? As a general rule, the "old oaken bucket" is far from pure. Why not have a water still?

A brush mop is a collection of brushes and mops which are adjustable on the same handle or on different handles.

Aluminum cooking utensils are easily kept clean, and for that reason are especially sanitary. They are impervious to most acids and, being cast in one piece, do not crack and gather dirt and germs.

Cooking in paper bags is just now being tried all over the country. Specially prepared bags may be purchased, or any clean paper bag may be used by greasing. They make pan washing unnecessary.

The dish pan stand consists of a rack made of heavy steel wire, on four legs three and a half inches high. The idea is to lift the dish pan from the sink bottom, not only making it easier to work at but keeps the bottom

of the pan from marking the sink bottom. The rack may also be used for many other purposes around the kitchen.

Electric contrivances are numerous: The electric iron, small ones, and mangles; the toaster, hot water heater, chafing dishes, percolating coffee pots, tea kettles and electric disk stoves; also, electrically operated washing machines, hair curlers, and other devices. If you really want to lighten your burden look about you. The world is filled with "helps."

SUMMER IN THESE HOUSES.

Plants and Bugs Grow Under Glass in the Winter.

A tropical atmosphere hangs over a part of Kansas this winter. A good deal of it is in the greenhouses of the Kansas Agricultural College. There the temperature is watched even more closely than in the class rooms, for a great deal depends on the experiments that are being carried on in these glass houses.

The largest of the greenhouses is just north of Horticultural Hall. It is divided into six divisions, and three of these are used for experiments in horticulture and one each for botany, agronomy, and entomology. All of this series is used for experiments. The agronomy section is used mostly for tests conducted by the crops classes. All of the other sections are being used for the special indoor, winter experiments. These houses were built about a year ago.

Another series of greenhouses is used more for commercial winter vegetable production. They are west of Dairy Hall and are the oldest ones on the grounds. Considerable quantities of lettuce and other winter luxuries are grown and sold at a good profit by the horticultural department, which has charge of this work.

Another greenhouse is in front of Horticultural Hall. In this, as in the other houses, practicable, economic

DRY THE DISHES, TOMMY.

THERE'S MANY A WAY FOR A BOY TO HELP IN THE HOUSE.

He Could Hang up His Cap and Neckties, Make His Bed and Help With the Dusting—Needn't Be a Sissy, Either.

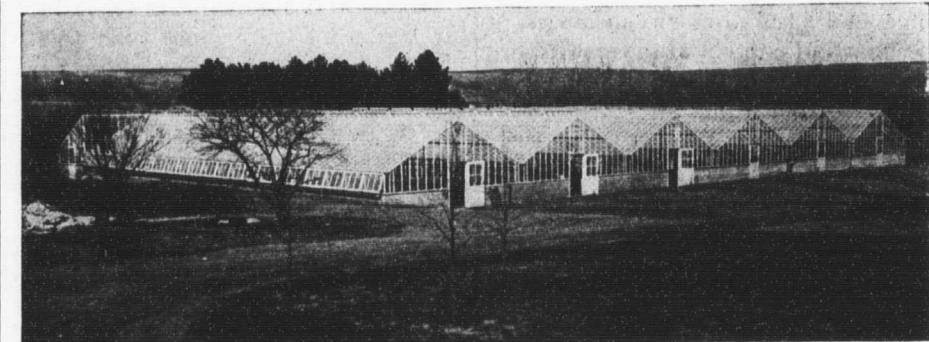
Train your boys to help in the house-work. They need not, necessarily, become sissies just because they can broil bacon or build the kitchen fire without leaving the hearth looking as if an avalanche of cinders and shavings had struck it. The ability to do these things will prove valuable to them some day.

There is no valid reason why the son of the family should leave caps, shoes, and neckties strewn about for a tired mother to pick up. "Just like a boy," is no reason, and it is no excuse. Men must have system and order in their business. Why not learn these principles in boyhood?

It would take only a moment of a boy's time to open the windows and turn back the bed clothes for airing before leaving his room in the morning. But it would be a great help to his mother or sister when either came to make the bed after breakfast. Indeed, if a mother's work is heavy, there is nothing to hinder boys from making their own beds. Cadets in military academies have been known to do as much without loss of manly dignity.

Carrying in water and fuel is not a woman's work, and mothers should train their sons to do these things for them without being urged. Boys can lighten the burdens of wash day for their mothers by turning the machine and the wringer. No boy was ever seriously injured by wiping the dishes or scrubbing the floor occasionally in a household crisis, and sewing on buttons is valuable training.

It would be a grave mistake to make boys feel they were household drudges, but if they are taught to be consider-



Greenhouses for work, not for roses.

experiments are carried on. Very little time and effort are expended in the production of flowers and other hothouse specialties.

"OWDY, YER LUDSHIP, 'OWDY?"

Professor McKeever has a Request from Hoot-mon Land for Bulletins.

Professor McKeever's "Boy Raising" bulletins are wanted in England. Lord Pentland, secretary for Scotland, writes that he read with a great deal of interest Professor McKeever's article in the October *World's Work*. He asks that the three bulletins on boy raising, already published, be sent him.

Cake for Wedding.

For the small home wedding the white wedding cake holds first place. Use a lady cake or pound cake recipe, double the proportions, and have the tinner make you a huge pan twice as big as those used for fruit cakes.

When cold, cover with an icing made of confectioners' sugar and white of eggs and decorate with wreaths of roses caught by bowknots as a border. —*Washington Herald*.

THE "HOW" OF DAIRYING.

Professor Reed Will Describe It Monday Night to the Science Club.

Proper feeding of dairy cattle may be made to increase the farmer's profits by 25 per cent. One-third of the cattle used in Kansas for dairy purposes are kept at a loss; one-third pay for their keep, and one-third pay a profit. By using the Babcock test the useless two-thirds can be eliminated. By proper feeding the yield of the profitable third can be greatly increased.

O. E. Reed, professor of dairying, will discuss the "how" of dairy cattle feeding before the Science Club Monday night, December 4, in Room 27, Physical Science building.

A Graduate to Pennsylvania.

R. E. Hunt, '11, of Marysville, Kan., visited the college Tuesday. Mr. Hunt is going immediately to the Pennsylvania State College to teach animal husbandry in the short course.

THE KANSAS INDUSTRIALIST

Established 1875.

Issued weekly during the college year by the Kansas State Agricultural College, Manhattan, Kansas.

PRES. H. J. WATERS Editor-in-chief
PROF. C. J. DILLON Managing Editor
DR. J. D. WALTERS Local Editor

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The typesetting and other mechanical work is by students in the school of printing, of which J. D. Rickman is superintendent. Both these departments are in Kedzie Hall.

Newspapers and other publications are invited to use the contents of the paper freely without credit.

The increasing demand for THE KANSAS INDUSTRIALIST makes it necessary to insist upon the payment of the regular subscription price, 50 cents a year, invariably in advance. No commission is paid any one for subscriptions, and no advertisements are accepted. The paper is sent free only to the alumni, to officers of the state, and members of the legislature. This rule will not be violated.

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SATURDAY, DECEMBER 2, 1911.

ATHLETICS AND THE CROWD.

"We need to place a higher estimate upon scholarship and a lower estimate upon extraordinary physical development," said President Waters, a few days ago, in speaking of "Ideals of Intercollegiate Athletics," in Columbus, Ohio. "The greatest problem has been, and still is, for that matter, to keep the public and the spectator from exerting too great an influence upon the ideals of athletics," said President Waters. "From the outset," he said, "we should have it understood that the play has been organized as a part of the education of the students in college, and not as a source of pleasure to the onlooker.

"This all seems quite easy, but experience has shown quite the contrary. Picture in your mind forty thousand of the most intelligent, most highly cultured, and most influential men and women of New York and vicinity turning out to witness a game of football! Add to this the intensive interest of every alumnus and former student and friend of the two institutions represented in the contest, and indeed all the young men with red blood in their veins wherever they may happen to live, and we realize the influence the men on the side lines can and do exert. Many of these interested spectators are members of the board of control of the institution, or benefactors or members of the legislatures from which the state institution must derive its support. It is easy to say that the spectator shall be ignored, but actually to put it into effect is another matter.

"When intercollegiate athletics is permitted to develop beyond the point where it is a needful stimulus to the physical development of the entire student body, and especially for the development of the less perfectly developed students, it is attaining undue prominence, and to the extent to which it exceeds the limit of importance here set, it is a positive menace.

"On a very liberal estimate, not over ten per cent of the students, either directly or indirectly, engage in intercollegiate athletics of any kind. This estimate includes all those that belong to the second teams and all those that try for any of the teams. Of all the students in the institution, this ten per cent stands at least in need of physical development, and yet by our present protection they receive practically all the training the institution offers.

"When the gymnasium and athletic field are made a substitute for the pool room and the saloon, and athletic activities take the place of the stale, senseless college pranks and stunts, we shall have taken a long step toward the ideal.

"Much has already been accomplished along this line, for with the rise of athletics we note the decline of the time-honored college pranks. Such pranks as are left to us usually are perpetrated in midwinter when competitive sports are necessarily at a low ebb and when students are forced to stay indoors much of the time. Or they happen at the opening of school

before athletics have been organized, and before the students' interest in these matters has been aroused.

"Experience has abundantly demonstrated that athletics that do not even approach the ideal will go a long way beyond developing a sense of social uprightness, a matter in which our class-room instruction thus far has not succeeded conspicuously."

THE COUNTRY EDITOR.

There can be no doubt that, far and away, the editor of a good country paper is the "biggest" man in his town. Anyone who has lived in a small place knows this. After the editor comes, in point of importance, the postmaster—if, unhappily, the two are not merged—and following, a close third, is the station agent. But does the editor always live up to his opportunities; does he get all there is coming to him; has he a good living; how many country editors in Kansas—there are about 775—have good livings?

If the editor is not getting his share of the good things of life, whose fault is it? Is it because he, like many farmers, does not keep books? Does he use a cost system? Is he still living in the darkness of a ten-cent rate? Doesn't he know that no one can afford to print anything for less than twenty-five cents? Has he taken account of his unproductive time? Know all he needs to know about depreciation? Getting his share of the advertising?

That's the point! And why doesn't he get it? Perhaps he is living "in the midst of" a lot of half-asleep merchants and hasn't educated them to the mistakes they are making. Perhaps he hasn't "set" an ad. for each of them to show them what it would look like. Maybe the merchant never has seen his name in print, except in the personal column. There's a chance he needs talking to. Also, there's a probability that the editor and the merchants are such good fellows that they are overlooking the numberless ways in which they might help one another.

It's a big problem—this business of running a country paper. One big difficulty to face is the unwillingness of men to admit defeat. That's why so many hang on and try to support families and maintain appearances on circulations of 250.

To one who began in the game in a far western county more than thirty years ago, when it was nearly always a problem to find the money to get the patent inside out of the express office, the reflection is still pleasing that, even with all the trouble and the need for hustling, the editor is the foremost person in town. But he should run the investment risk of having his office on a front street, or mighty close to it. He should have clean windows. His sidewalk should be swept—and not by the wind. He should impress himself upon the public for what he is: a person of consequence, whose utterances are read by the men and women and children and are, therefore, carefully prepared in good, newspaper English, the English of the people. He should keep his front page clear for the news of the community, and his editorial page free and filled with boosts for his own town; boosts for sidewalks, for factories, for lights, for paving, for good service in every public utility. If he writes of politics, it should be chiefly of his own town, county, and state. He need not ape the city dailies. He should charge a fair price for his paper and for his space. And he should shave every morning. With such a program any country editor can defy the world. It is his's.

A SQUARE DEAL FOR BOYS?

Country boys are not getting a square deal in the average country neighborhood. The educational advantages of most rural schools are not up to the proper standard. It is up to the concrete-hearted taxpayers, that fail to vote enough money to support a good school, to reform. You can't have an efficient school unless the teacher also is efficient. You must pay a good salary to get efficiency.

Get a teacher that is interested in

A Golden Text.

Lead me, O Lord, in thy righteousness; make thy way straight before my face.—*Psalm 5:8.*

country life. If he or she is not interested in the rural uplift that is going on everywhere, the greatest success as a leader of the young people is impossible. The city teacher usually cannot understand the country viewpoint. Rural teachers and leaders must come from the farm.

All boys and most girls are much interested in athletics. Encourage this interest. Organize football, basketball and baseball teams and play the teams from the surrounding districts. It will develop community spirit and aid in character building. Also, a stronger and healthier lot of young people will result. Organized athletics have a place in every school in the country.

Start a literary society. Elect a president that knows Robert's "Rules of Order" and conduct all business properly. Appoint a program committee to have charge of the programs. And insist that a member appear with a number when he is assigned. It is not necessary to limit the membership to school children. Allow everyone in the neighborhood to join and make it a community organization. Literary societies, properly conducted, are one of the most important agents in the country uplift.

this kind of human beings to read such a book as "The Writing of News." It is exceedingly carefully prepared and most attractively presented by Henry Holt & Company, New York. There are no tiresome dissertations on this or on that, but only a straightforward explanation by a writer who has evidently been against the real thing in newspaper work. And it doesn't take long to detect the touch of the man who knows his business. This Charles G. Ross, by the way, was a newspaper reporter—not a journalist, glory be. The book costs \$1.40.

FOR A BETTER COUNTY FAIR.

Weren't there several objectionable features, this year, in the county fair, down your way? Perhaps you are a member of the board, in which event it will pay you to give these things your attention right now. If you are just a plain, ordinary, pay-at-the-gate citizen, you ought to make yourself heard and see if it isn't possible to improve the annual exhibition. You will find the board members eager to listen.

For one thing, you ought to drive out the faker. The balloon ascension, and most of the similar methods of separating the fair management from its money, were dead, or threadbare "attractions," before you were born. Spend the association's money where it will do your people some good. Instead of an elaborate display of fireworks, for which you would have to pay about four prices, organize a stock-and grain-judging contest for the boys

SWEET TEMPER.

It is easy in the world to live after the world's opinion. It is easy in solitude to live after our own, but the great man is he who in the midst of the crowd keeps with perfect sweetness the independence of solitude.—*Emerson.*

Buy the teacher all the equipment for teaching that is necessary. You wouldn't expect good results from a farmer that used old and worn-out tools. No teacher can get the best results without plenty of apparatus for instruction. You agree that you desire efficiency in the school your children attend. Cut loose from some of those dollars that you squeeze until the Goddess of Liberty is mashed out of shape, and you will get efficiency.

F. B. N.

ANOTHER HELPFUL BOOK.

Old newspaper writers, desk men, editors of every degree, and instructors in the new branch of college education, called journalism, will find much comfort in "The Writing of News," by Charles G. Ross, assistant professor of journalism in the University of Missouri. Mr. Ross' contribution is more than a handbook. It is the handiest kind of a handbook, the kind that reminds oldtimers when they are likely to fall into error—and the best of them do it. It is a book that, without any exaggeration, in the opinion of one who has given the subject the closest possible attention, should be in every newspaper office and upon the desk of every college professor—in every department—in the country.

It is amazing, at times, to note the almost unearthly delight and cunning with which the news feature, the important thing, is carefully concealed by some otherwise intelligent writers, whose educational opportunities have been unexcelled, who have rubbed

against the world, who know its men and women, who have read newspapers for thirty years, and would be held by any sane jury as likely to know an unusual happening when it comes along. But they do not. A man might turn handsprings off the top story of the Masonic temple in Chicago, alight uninjured in State street, and run back upstairs without a complaint—and not get a rise out of two-thirds of the readers of to-day's paper. In some ways their appetites for sensational things have been surfeited.

It would be a fine experience for

and young men. Make the prizes large enough to be worth while. Get a man from the agricultural college to act as official judge and to give the boys some lectures on judging.

Don't you see that more good to your people will result from a judging contest than ever would result from the performance of some faker.

- Get along without the "hoss race." You don't need it to get the crowd, and the money can be spent where it will do your farm patrons some real good. Use the money for larger prizes for well-bred cattle, hogs, draft horses, and other well-bred live stock.

And don't fail to give some good prizes for corn, wheat, and other grains and grasses. Isn't it more important to encourage good farming in your own community than to allow a bunch of jockeys to make away with your own money?

But no matter what your ideas are, begin to plan for a larger and better fair. Plan the fair of 1912 so that it will be the most successful in the history of your association. F. B. N.

THE INTERNATIONAL EXPOSITION.

The greatest live stock exposition in the world opens to-day, in Chicago. Every person sincerely interested in the welfare of agriculture or animal husbandry—and these mean the country's future food supply—should be there. As an exponent of these things, encouraging their continued improvement, the International is entering upon its tenth year. Its usefulness is unimpeachable, its importance undoubted.

It has been demonstrated that these great, annual shows are vastly beneficial to agriculture in general; that by encouraging expansion and improvement in live-stock production they contribute directly to increased and improved crop growing. The reason is plain. The raising and feeding of live stock on the farm enhances soil fertility. Soil fertility is the foundation of agricultural prosperity, and agricultural prosperity is the basis of general prosperity. Live stock on the farm consumes farm waste and converts it into money.

Using Paper Bags?

No more pans to wash—hooray!
How fast the old world wags.
Kettles and pots all thrown away,
We're doing our cooking in bags.

No more dishes to wipe, hooray!
No work in the kitchen, phew!
Why should we dirty the silverware?
Eat through a paper straw.

Paper for plates, paper for cups,
Paper all over the place.
Grea-y paper, and paper that cracks,
And paper to wipe your face.

No more worry for mother, now:
Nothing but boasts and brags.
We're saving a lot on groceries—BUT
We're spending it all on bags.
—Charles Dillon.

SUNFLOWERS.

Is it proper to refer to the case on trial in Kansas City as Hyde-bound?

The queerest thing about the short course is the fact that its good effects last so long.

"What does Wichita need most?" inquires the *Beacon*. Right now it needs a new kind of Sunday.

Having failed to get in on time with the "Shop Early" slogan, we now propose this: Swat the flies—next spring.

They certainly know how to kill time in Erie. Mr. Rodgers butchered Monday, according to the esteemed *Record*.

Why shouldn't farm women have an 8-hour day? Because of a fool custom that makes most of them work twice that long.

A notice from Topeka says Professor Valley is to sing "All Through the Night." But of course this may not be true.

For our part we are thankful there are no carpets to beat before spring, and we are thankful for a furnace man who trusts us.

The farmer who howls loudest against "expert" and "book farming" invariably fears that the new methods involve more work.

Some men still believe the moon the best guide in planting grain and other things. Very few of this class, however, ever finish their chores before 9 o'clock.

Although there is a "frieze around the wall," a reporter for THE KANSAS INDUSTRIALIST insists that one of the new literary society halls has a "warm, welcoming effect."

And don't forget to clean the back yard, and keep it clean. The state board of health is urging this upon everyone every month. It comes only once a year in the cities.

No merchant will advertise in a paper given up wholly to advertising. It's reading matter that sells a paper. The reader has a right to at least a third of the space—and that's little enough.

Suggestions for a name for the new bridge across the Missouri at Kansas City have been requested by *The Star*. We may now expect a flood of crazy ideas and, no doubt, much cheap poetry. The first names offered were "Jaclame," to take in Jackson and Clay counties and Missouri; and "Kacimo." Both were inevitable.

"Get ready for a laugh," cries Charles Harris, state free employment agent in Topeka, "get ready everyone—G. W. Ogden has written a harvest hand story for *Hampton's* in which he shows how much he doesn't know about employment agencies." This, certainly, was the purpose for which *Hampton's* sent Harris the advance sheets. Well, Ogden may use a few old "jokes" about harvest hands, but if Harris can tell an old-time reporter, like Ogden, anything new about employment agencies he'll have to get mighty early. Ogden is no tender.

In the matter of hams, as most folk know who read, President Waters is a connoisseur, and a little bit more. Not long ago one of the choicest products of his smokehouse was sent to a friend as a sort of Thanksgiving gift. The friend, unaccustomed to having such treasures lying around, telephoned the President, intending to get a few pointers about the cooking. "I don't know how to handle it," the friend explained. What would you do with it?" Silence for ten seconds. Then: "I believe," said the President, "I believe I'd frame it, and put it in the parlor."

LOCAL NOTES.

G. W. Conn addressed a rural school district meeting six miles from Lawrence, December 1.

Harry L. Kent went to Bronson, Kan., November 25, where he gave a number on the high school lecture course.

Miss Frances L. Brown gave an address, yesterday, before the Southwestern Kansas Teachers' Association at Garden City.

P. N. Flint, assistant professor of animal husbandry, will attend the International Live Stock Show at Chicago, this month.

L. M. Peairs, assistant in entomology, has been in charge of the program, this week, at the meeting of the National Horticultural Congress at St. Joseph, Mo.

E. L. Holton, professor of rural education, was at Blue Rapids, November 22, organizing a neighborhood improvement club. He went to Kinsley, November 24 and 25, and addressed the Edwards County Teachers' Association, and to Goodland, December 1, speaking before the Northwestern Kansas Teachers' Association.

ALUMNI NOTES.

Dr. E. L. Morgan, '01, is practicing medicine at Phillipsburg, Kan.

Leo Price, '11, captain of the baseball team last spring, is now working at La Porte, Ind.

C. H. Carr, '11, visited the college the first of the week. He has resigned his position with the Western Electric Company at Kansas City, where he has been working since his graduation, to take up work in the meter department of the Kansas City Electric Light Company.

FOR MORE BEEHIVES.

The Kansas Beekeepers' Association Also Will Fight Diseases.

Kansas beekeepers are going to remedy bee troubles in this state. The Kansas Agricultural College and the University of Kansas, with the aid of inspectors appointed in every county of the state where bees are kept, are to be the leaders in this fight against bee diseases. This was decided at the ninth annual meeting of the Kansas Beekeepers' Association at the Kansas Agricultural College, November 27 and 28.

How to control the common diseases of bees was the principal subject under discussion at this meeting. It was thought that the best method of arousing interest in beekeeping is to demonstrate in various parts of the state that this side line of farming is profitable, both for the honey and also as a means for pollinating fruit and seed-producing plants.

Dr. T. J. Headlee, state entomologist with the agricultural college, told the association that bee diseases could be controlled in a satisfactory manner only by the careful inspection of all stands. As a result, the plan of having an inspector in every county was decided upon. Doctor Headlee will have charge of the inspection work in the north half of the state and S. J. Hunter, professor of entomology at the University of Kansas, will be in charge of the work in the south half. Inspection and treatment of bee diseases will be rigorously pushed during the next summer.

GYM HALLS WELL FURNISHED

In the New Gymnasium Seven Organizations Have New Quarters.

Anyone going through the new gymnasium cannot help being impressed with the excellent taste shown by the literary societies in furnishing their new halls.

The rooms on the third floor in the west end of the building are given over to the Webster-Eurodelphian and Franklin Societies. The Webster hall is furnished with an elegance that is pleasing and restful. The rostrum is curtained off at the sides, thus making a little entrance hall just inside the door. The walls are covered with

plain kalsomine, and the carpet is a rich green plush. The chairs are of solid oak with leather upholstered backs. The president's desk and chair, with the table for the critic and secretaries below, remind one of a senate chamber. But the real feature of this hall is the lighting system. Large tungsten globes are enclosed in huge, inverted brass reflectors which throw the light to the ceiling. This indirect system is vastly superior to the old direct lighting.

Across the hall from the Websters is the room occupied by the Franklin Society. This is a very well-arranged and well-finished hall. The walls are decorated with society banners and a few large portraits of famous Americans.

At the east end of the gymnasium and on the third floor are the rooms of the Hamilton-Ionian and Alpha Beta Societies. The Hamiltons and Ionians have the south room and have nearly succeeded in equaling the results achieved by the Websters and Euros. in fitting up their room. In the frieze around the wall the Ionian harp and the Hamilton shield alternate. The floor is covered with a soft red carpet which gives the room a warm, welcoming effect. The chairs are of solid oak and the rostrum is furnished with a heavy oak desk and chair for the presiding officer. The table for the other officers is at the left of the president's chair. The room is lighted with four large clusters of tungsten lights.

The Alpha Beta room is across the hall. Like the Franklin hall at the other end of the building it is simply but prettily furnished.

The Athenian Society has a room in the east end of the gymnasium on the second floor, just below the Alpha Beta hall. It is finished much after the style of the Franklin and Alpha Beta halls.

AS TO UNDERGROUND WATERS.

Some are Exceptionally Pure, but Others are Unsuitable for Use.

Water is found in some amount in all formations below the earth's surface, from the loosest and most porous sands and gravels to the hardest slate and granite. The amount varies from the mere trace chemically combined in the molecules of the rocks to immense reservoirs which supply wells flowing hundreds of thousands of gallons a day. Some waters are so pure that a refined chemical analysis shows only minute traces of organic and mineral matter; others are so heavily charged with minerals or other impurities as to be unsuitable for use.

The slope of the surface at any point is one factor determining the amount of water absorbed by the ground. The direction and amount of slope also determine the form of the water table—that is, of the upper limit of saturation. Except where the surface is flat the water table is generally not parallel with the surface; it is almost invariably farthest from the surface on the summits of hills and mountains and nearest to it in valleys and along the coast, reaching the surface in swamps and along rivers, lakes, and beaches. The surface of the water table is always in motion, its higher portions flowing toward the lowest outlets along rivers or the sea. This direction of flow explains why fresh water usually is found when a well is dug in a sandy beach.—*From Water-Supply Paper 223, United States Geological Survey.*

Wall Duster.

A bag made of outing flannel, with a ruffle at the bottom and drawstring at the top, to fit over a broom, is a handy article at housecleaning time.—*Denver Times.*

Pretty Coiffures.

Wonderfully pretty hair coiffures may be made by studding a gold ribbon with turquoise or a black one with diamonds, a green with pearls or turquoise.—*Washington Herald.*

To save fingers, always use a small, clean cloth wrapped on a stick to grease hot pans and bake tins.

A FLOWER BED INDOORS.

THE PLACE FOR IT IS IN A SUNNY WINDOW.

Plants Well Arranged in a Window Will Make a Room Much More Cheerful in Winter—Some Varieties of Vines and Flowering Plants.

You can have a window this winter that will be the envy of your neighborhood by using a little time and money in buying flowers. Nothing will make a room look more cheerful. By careful selection a supply may be maintained from frost until the flowers are out in the spring.

The temperature of the room for the growth of flowers is the same as for a human being. Plants should be turned once a day or they will grow one-sided in their search for light. Care should be taken that they are in large enough pots, also that there is good drainage. An inch or two of gravel in the bottom of the pot will remedy that. The soil should be kept moist; a fairly rich loam is good, with a teacup of bone-meal to every half bushel of soil for fertilizer. Most flowers may be grown from seed, but bulbs can be had now for immediate use.

Vines, foliage, fragrance, and flowers should be sought in selecting the plants. Then arrange them artistically in the window.

FOR THE WINDOWS.

Good vines for the window are the cobeæa and the thunbergia. The cobeæa has purple, bell-shaped flowers, two inches across. Thunbergia vines have yellow, rich orange, white, blue, or white and blue flowers, depending on the variety. Sow the seed early in January or February. The plants can be grown out of doors during the summer and cut back in September and potted for the window. Nasturtiums or morning-glories give a great deal of pleasure, but require much sunlight. Seed sown in July or August will begin flowering about Thanksgiving and continue during the rest of the winter.

Vines that show well in the hanging baskets are the smilax and asparagus. The branches of the asparagus hang down gracefully on all sides, and if kept growing freely all summer will produce an abundance of red berries about Christmas time. Another plant that will bear bright red berries for Christmas is the Jerusalem cherry. These berries hang on for three months. The plants are grown easily from seed. They should be sown in late winter or early spring.

WHEN TO SOW.

Among the flowers grown for their fragrance are heliotropes and mignonettes. The heliotrope has purple flowers, is very fragrant, and blooms a long time. Sow the seed any time from February until May, and grow in pots all summer. Pinch back the plants desired for winter flowers. This gives them a stocky form and prevents them from blooming during the summer. For fragrance, the mignonette is by far the best plant. The flowers are unattractive and the plant cannot be transplanted successfully. For winter blooms sow the seed in July or August, using pots to avoid transplanting.

For foliage, ferns and the common foliage plants are good. Keep ferns well watered and repot them occasionally.

The geranium, pansy, scarlet sage, nasturtium, and hyacinth are good plants for flowers. Every one is familiar with the culture of most of these. The hyacinth bulb may be grown in water or soil. If grown in water, place the bulb in a glass, allowing the base of the bulb to touch the surface of the water. Keep the bulb in the dark until the roots have formed. Tulips and various species of narcissus may be grown in the same way.

SELENIUM A RARE ELEMENT.

Used for Reproducing Photographs by Telegraph.

Selenium is a rare and little known element described by the United States Geological Survey as having its greatest use in the manufacture of certain

glasses to which it gives a red color and in coloring enameled ware red. It is used to overcome the natural green color of ordinary glass and also in making glass of a distinct red color, such as that used on railroads for signal lights. Selenium has the peculiar property of being a very poor conductor of electricity in the dark and a fairly good conductor in the light, and a number of electrical inventions depend on this peculiarity. It has been used in experiments in telephoning along a ray of light, and for transmitting sounds and photographs from one place to another by means of a telephone or telegraph wire.

TWENTY-FIVE YEARS AGO.

A Few Interesting Reminders of Oldtimes in the College.

From THE INDUSTRIALIST. December 5, 1885.

A letter from Harry Rushmore, class of '79, shows that he is in the hardware business at Clyde. He promises a visit during the month.

Mrs. Winship's sewing department always attracts and interests visitors. All are impressed with the earnestness and skill of the teacher, much of which is reflected in her pupils.

The Alpha Beta Society will give its fourth annual exhibition on Thursday evening, December 17. An invitation is extended to the public, and to friends of the society especially, to attend this exhibition.

Miss Belle Selby, class of '82, writes from Fort Scott that she has opened an art school at that place. She says

Homely Wrinkles.

Oh, joy it is to live,
To know, to hear, to see!
God has so much to give
And gives to gladden me:
Music and mirth and love on
earth,
And heaven yet to be.

—*The Farm Journal.*

she doesn't regret having taken the course of study at this college; and drawing, especially, has been of great benefit to her in her line of work.

Society Hall, Nov. 28, 1885.

The Webster Society was called to order by President Brown. Roll call. Prayer by G. C. Keyes. F. S. Ditto, J. F. Kurr, and W. B. Norris were initiated, and H. W. Atmen proposed for membership. Debate, "Resolved, That General Lee was a superior to General Grant." Affirmative, W. J. McLaughlin and D. G. Fairchild; negative, M. Hulett and J. Harrison. The judges, Messrs. Higinbotham, Meyer, and Martin, decided in favor of the affirmative. E. A. Allen and L. D. Buenting presented essays; declamation, A. J. Snyder; reading, W. H. Fay; Reporter, M. P. Davis. A vote of thanks was tendered to the Hamilton Society for the use of its room on November 21.

C. M. B.

Society Hall, Nov. 28, 1885.

The Hamilton Society was called to order by President Perry. A goodly number of members answered to roll call. Mr. Coburn led in prayer. C. Wickizer read an essay. Debate: question, "Resolved, That Lincoln deserves more credit for preserving the Union than Washington does for establishing it." Affirmative, C. Owen and J. Hammerli; negative, E. M. Paddleford and G. W. Waters. The judges, Messrs. VanZile, Hook, and Campbell, decided in the negative. Recess. F. E. Goss declaimed and H. F. Gourley read the *Recorder*. Music was furnished by the committee. Miscellaneous business and extempore speaking occupied the time till adjournment, 10:30.

L. E. N.

320-Acre Homestead Areas Opened.

During October six areas were designated by the Secretary of the Interior as suitable for entry under the enlarged-homestead act. These include 32,110 acres of land in Idaho and Oregon and make a total of 190,426,957 acres which has been designated by the Secretary of the Interior as enterable in 320-acre homestead units.

BE GOOD TO THE HENS.

IMPROVE THE MENU AND YOU'LL GET THOSE WINTER EGGS.

The Bill of Fare Should Contain Grain, Animal Food, Green Food, Grit, and Fresh Water—Make Them Scratch in Straw for Their Feed.

A hen can't lay unless it has an abundance of feed. Egg production isn't made with a one-grain diet, either. Hens like a variety in the menu, and they have to have it before many eggs are laid.

To be up in the front ranks in egg production, hens must have in their bill of fare grains of various kinds, animal food, green food, grit, and fresh water. Not much of a variety, but many poultrymen are asleep, and aren't furnishing their chickens with the proper feed stuffs. Yet such men do the most complaining about their hens not being on the job.

About an ounce of food a day is needed for every pound a hen weighs. This estimate is followed by many successful poultrymen. Enough lime is found in one pound of oyster shells for several dozen eggs. Clover hay, well cured, will furnish the green food part of the ration.

GOOD CARE IS NEEDED.

The welfare of chickens must be looked after during the growing period, as no amount of pampering and petting at maturity will compensate for neglect then. Preparation and foresight must be practiced as much in poultry culture as in the successful growing of a wheat or corn crop. The man making a mark in any undertaking takes a look ahead. The same applies in rearing chickens for egg production.

Winter eggs come from hens of a good laying strain, housed in large, comfortable quarters—well lighted and dry—and an abundance of food. If these requirements have been filled and still an egg production isn't forthcoming, look for lice or mites. Perhaps the pullets weren't hatched early enough, or the hens aren't getting exercise. Possibly they are too old to lay.

Don't overfeed the chickens, or the winter egg production will go glimmering. If the food gets down in the mud it becomes dirty, is wasted, and disease is likely to be spread. Make the hens scratch for their feed in cold weather. When hens are made to scratch, the losses from disease, especially cholera, are held in check during the shut-in periods of cold weather. Hens will be healthier, and the drones will be obliged to use up extra energy, which promotes a full circulation of the blood.

A SCRATCHING YARD.

Provide a scratching yard or a scratching shed in which wheat or oat straw is strewn at a depth of six to eight inches. Then throw the feed into the straw. Coarse chop, kaif corn, oats, and oats with other feeds, sugar cane, millet seed, and chopped roots are suitable for feeding this way. It is likely that an open scratching yard would not be very satisfactory if near or in range of the farm dwelling, on account of the straw being blown about by the wind. Under such conditions it probably would be advisable to fence the yard tight with boards around the bottom.

Twenty Books on Banking.

The college library has received twenty volumes on finance and banking from the Union National Bank of Manhattan. Most of the books are a record of the proceedings of the American Bankers' Association and of the Kansas Bankers' Association. These books make an especially welcome addition to the reference works on banking, finance, and economics.

Kitchen Advice.

As fast as an article in the kitchen wears out replace it with the new white enameled ware, which comes in every known shape, even including knives and forks, says the *Philadelphia Times*. It is easy to keep clean, as well as being fresh and dainty for use through summer.

TO KEEP RABBITS AWAY.

WRAPPING AND TRAPPING WILL PROTECT THE YOUNG TREES.

A Simple Trap Made with a Barrel Will Catch Rabbits—Spraying Bark of Fruit Trees Will Act as a Repellant.

Look out for rabbits. They will destroy young orchards faster than you can set out the trees. In Kansas the danger from rabbits is not so great as in many other states, but the damage done is sufficient to warrant careful attention.

Wrap the trunk of every tree to a height above the reach of rabbits. Various materials are used in wrapping. Some use cornstalks or laths, binding them about the trees. Burlap answers the purpose fairly well. Tree veneer made of very thin wood may be obtained from nurseries and seed stores. When wrapped about the trees it fits up closely and will enlarge as the trees grow. All of these afford an excellent harbor for injurious insects and should, therefore, be removed in the summer. Something that affords good protection for the trees and has not this objection is a wrap of ordinary wire screen.

USE A REPELLENT.

Another way to protect the trees is to smear or spray something upon the trunk that is obnoxious to the rabbit. The blood of a rabbit put on the trunk as high as a rabbit can reach is very effective. A mixture of tallow and tobacco answers very well. It is most convenient to spray the trees, especially if there are many of them. The ordinary lime and sulphur spray used in destroying San José scale is very good. Mix together 4 pounds dry, fresh, hydrated or ground lime; 3 pounds powdered sulphur. Make a thin paste with water and boil until the mixture becomes a reddish amber color. Dilute to 10 gallons and spray while still warm. This must not be applied when trees are in leaf.

At the Kansas State Agricultural College a spray made of buttermilk and common soot has proved very satisfactory. One gallon buttermilk; one-half pound common stove soot. Boil twenty minutes. Keep well stirred to prevent clogging pump. These sprays are only of temporary use, since the first rain will destroy their effect.

AND KEEP IT CLEAN.

It is very important that the orchards be kept clean of dead grass and brush piles. All breeding places should be destroyed and the rabbits trapped or poisoned. An excellent poison is prepared by chopping up apples or melons and adding sugar equal to one-half the weight of the fruit. Boil until a thick jam is formed, then add strychnine at the rate of one ounce to 25 pounds of the jam. Rabbits are very fond of jam and are thus easily poisoned if this mixture be placed in their runways.

GUINEA MEAT IS DELICIOUS.

And in the Big Cities the Demand for it is Increasing.

You have heard of guinea fowls, but did you ever taste one? If you like the delicious flavor of wild game, especially the prairie chicken, you are sure to enjoy a meal of guinea fowl.

When young, the guinea is more tender and more juicy than the prairie chicken, and is far superior to any other bird as a broiler or a fry. When matured they cannot be excelled by any chicken for a pot roast or pie. Their flesh is rather dark, but fine grained and very tender, with an exquisite gamey flavor. The eggs, while rather small, have a rich taste that most persons like. There is an ever-increasing demand for guineas in the larger cities for restaurant trade. There's profit in raising them.

Guineas are not so serviceable as hens when raised in close confinement, but if allowed the run of the farm they will practically raise themselves, with hardly any expense to their owners, and will return a profit in both eggs and meat. The guinea is naturally a wild bird, and will usually range in

the wildest part of the country, so that it is usually difficult to find its nest. If guinea and turkey eggs are set at about the same time, and the young divided into flocks, half guineas and half turkeys, when given to the brood hen, the guineas will remain with the other birds and will not be nearly so wild as when kept alone.

The feed for young guineas may be the same as for young turkeys. After three weeks they may be put on free range, feeding three times a day, with plenty of fresh water. They do not scratch like other fowls, and therefore are safe to have in the garden.

WORMS ATE MUCH CORN.

Nearly 100 Per Cent of the Crop Was Damaged, Bug Experts Say.

Nearly 100 per cent of all the corn grown in Kansas this year was wormy. Investigators for the entomology department of the Kansas Agricultural College who have been in the fields make this statement. Not for years has the percentage of infection been so large. Corn ear-worms did the work. The reason that the damage was larger this year, says Dr. T. J. Headlee, state entomologist at the agricultural college, also can be blamed to the drouth last summer. Corn grew so slowly that a third brood of the worms was hatched on the silks and tassels. A third brood rarely hatches before the corn ripens. But when it does, as it did this year, the damage is greater.

Doctor Headlee has estimated that the normal yearly damage done by this pest is the infection of about 50 per cent of the corn. This means, in two years, a loss of about 5½ million dollars. But there is another serious damage which the corn ear-worms do. They cause corn to mold and the molds, in turn, cause diseases in horses. Blind staggers in horses is caused by moldy corn. As soon as a little worm dust collects on an ear, a mold begins to grow. It spreads rapidly, living on the excrement of the worms. A large per cent of these molds are the species particularly harmful to horses, experiments at the agricultural college have shown.

The corn ear-worms now are in the soil of corn fields that were infested last summer. They will remain there until next June. They are in the pupa state now, but next spring they will become moths, whereupon they will begin to lay eggs which hatch into worms. Fall or winter plowing will kill the pupae that are wintering in the ground. That is, it will kill most of them, Doctor Headlee says—enough, anyway, to cut the loss next year to one-half. Weather and insect enemies kill these pupae, when exposed by plowing. Early planting of the corn in the spring also will help to avoid damage. If it gets an early start, the corn will be ripe before the third brood is hatched.

THE OLD COW PAYS HER WAY.

Mulvane Man Makes Good Money Out of His Three Milkers—Well Cared for.

MULVANE, KAN., NOV. 13.—There are still some folks skeptical about whether the milk business is worth while or not. Here's a story that speaks loudly on the affirmative side.

Albert Norden has been milking five cows. Three are Holsteins, one a shorthorn, and one a white face—an exception to the rule—a good milker. These five cows in the last 12 months, besides furnishing the family with milk for domestic use, have brought in from the milk plant checks for a little over \$700, or an average of \$140 to the cow. Of course that is not a big average, but it's a mighty good one, too, considering that the business here is just starting.

Of course these cows were well cared for. They were stabled in bad weather, fed plenty of good feed and were well treated. The care and attention given a milch cow will pay as well as any other work done on the farm.—*Wichita Beacon.*

If soup is to be good it must never be allowed to get cold in the saucepan, but must be strained off at once when sufficiently cooked.

THE SITE COMES FIRST.

AFTER THIS IS SETTLED YOUR HOME BUILDING WILL PROSPER.

Here Are a Few Good Tips Prepared for Men or Women Who May be Facing the Life-Problem Right Now.

In putting up your farm home, location is the first thing to consider. It should be far enough from the public highway to give room for shade trees and an ample lawn. And for good, sanitary conditions it should be on higher ground than the barn, and not less than 100 feet from it.

The first essentials of this home are convenience and comfort. The principal rooms should be so situated as to admit all the morning sunshine possible. It adds to the cheeriness and brightness of the rooms. Figure so as to have the house face due south and the dining room and parlor on the south and east. With three bedrooms upstairs and the kitchen opposite the dining room and a bedroom off the parlor, an ideal arrangement of the rooms for this home would be obtained.

NOT TOO MUCH ROOM.

More rooms than are actually needed should not be provided for, as they must be kept up with additional work for the housewife. A porch on the south having roses and ornamental vines growing up over it would add much to the beauty of the place. The lawn should be kept well mowed and all trash cleaned up.

Labor-saving devices should be installed in the home, in order that the wife's work will be made as convenient as possible, and so she can save her time and strength for the fulfillment of her mission on the farm to the best advantage.

These devices should include water, heating, and lighting systems. The water system should consist of a kitchen sink, sewer system, and bath. The water can be pumped with a gas engine or windmill, and stored in a tank in the basement under pressure or in a tank outside and higher than the level of the pipes leading to the house.

A furnace in the basement, with radiator pipes running to every room, will give all the heat necessary for keeping the house warm and comfortable. The tank for heating the water used for bath and household purposes can be best attached to the kitchen range.

HOMEMADE GAS.

The lighting system may consist of either electric, acetylene or gas lights. When the acetylene lights are used, the tank containing the calcium carbide is put in the basement, and water is let drip upon this material. A gas is formed and conveyed to the lights in pipes. A bright light of a similar nature to sunlight is given off. If a gas engine is used to pump water, it may be used also for running a dynamo for an electric lighting system.

This system costs approximately \$500, with parts completely set up, including freight on shipment and a one-horsepower gas engine. The tungsten incandescent lights have been found the most satisfactory and economical lights for the farm home. Besides being used for lights, the electricity generated can be used for running a cream separator, clothes ringer, washing machine, sewing machine, vacuum cleaner, flat iron, and for doing light cooking.

In Place of Trip.

A girl who could take a trip only every other year made herself happy the alternate summers at home by purchasing some one of the special things she wanted, says the *Ladies' Home Journal*. One year it was a new sewing machine; another, some new furniture for her room; and again, a bookcase. Meantime she was studying up plans for the next vacation.

Schreiner Goes to Cornell.

T. E. Schreiner, who has been superintendent of the poultry plant, left Saturday for Ithaca, N. Y. He will take a position with the poultry department of Cornell University.

Coming to the College This Month?

Don't Forget the Annual

State Farmers' Institute

December 26 to December 30.

Look at this program for the week:

Stock courses and stock judging.

Poultry courses and poultry judging.

Gas engine classes.

Corn courses and corn judging.

Dairy courses and dairy testing.

Cooking and sewing classes and practice.

Ten Big State Conventions

HERE THEY ARE:

Kansas Boys' Corn Contest Association.

Kansas Corn Breeders' Association.

Road Officers' Conference.

Poland-China Breeders' Association.

Duroc-Jersey Breeders' Association.

Berkshire Breeders' Association.

Kansas Draft Horse Breeders' Association.

Kansas State Dairy Association.

Kansas Butter Makers' Association.

Be here the first morning and stay until the last train. You'll enjoy the experience and, incidentally, get what every man needs in this world: The other viewpoint.

And Don't Forget This:

The winter-term Short Courses are to begin January 3, 1912, and run for ten weeks—the chance of a lifetime. A condensed college course in your idle time.

For further information about the State Farmers' Institute address:

Director College Extension, Box G, Manhattan, Kansas.

For information about the short courses write to

H. J. WATERS, President,

Kansas State Agricultural College, Manhattan, Kansas.

A CREAM COURSE FOR THEM.

Ten Men Studied Butter Fat and Learned to Make Tests for it.

A special class in cream testing was given by the dairy department of the Kansas Agricultural College, November 14, 15, 16, and 17. There were twelve men in the class. An examination was given to eleven of these men at the end of the week by the state dairy commissioner, D. S. Burch. Only one man out of the eleven failed.

The work of this class consisted of three two-hour lectures, with the remainder of the time, eight hours every day, spent in the laboratory. The lectures explained the principles of testing, the importance and necessity of cleanliness in the dairy and cream station, and how to improve the quality of the cream. The laboratory work carried out the ideas of the lectures, giving the men the actual experience in handling the cream-testing apparatus.

These cream-testing classes are held from time to time, whenever the number of men asking for the work is large enough to warrant the expenditure of the time and money. A fee of \$1 is charged to all men taking the work. Anyone interested in cream testing who desires to know how to test can take one of these short courses.

To keep the whites of eggs from falling after being whipped, try adding, while whipping, a pinch of cream of tartar.

BETTER MILK, HIS IDEA.

A Farmer Took the Testing Course at the Agricultural College.

One of the men who took the special course in cream testing last week is a farmer. This is unusual, because most of the men who take this course are cream buyers. This man, Carl Schuler, of Atchison, Kan., has a herd of twenty cows. He separates the evening milk and sells the cream. The morning milk is sold to a local dairyman of Atchison, the per cent of butter fat in the milk being only estimated.

Mr. Schuler wishes to know more definitely how much butter fat is in his morning milk that he sells to the dairyman. Also, he desires to determine the per cent of butter fat as well as the total amount of fat given by the individual cows, in order to tell whether he is making money on his herd or not. The only way to find this out is to test the milk. So Mr. Schuler came to the Kansas Agricultural College to learn how to make the tests.

The Glee Club to Topeka.

The college Glee Club, led by Professor Valley, is to sing, next Wednesday, in a popular meeting of the Kansas State Historical Society, in Topeka. The meeting will be in the hall of representatives. Professor Valley is to have two solos: "The Two Grenadiers," and "Our Old Brown Homestead."

THE KANSAS INDUSTRIALIST

Volume 38

Kansas State Agricultural College, Manhattan, Saturday, December 9, 1911

Number 9

NOW FOR FARMERS' WEEK

AT THE COLLEGE, DECEMBER 26 TO 30, THE ANNUAL INSTITUTE.

Here's a Program that Would Interest Anyone—Something for Father and Mother and the Girls and Boys. Are You Coming?

Almost any farmer in the state should be able to spare one week out of fifty-two for something that will advance his own interest. That seems reasonable. In the winter, especially, when farm work is at a standstill thousands should be looking about for new ideas, new methods, better systems. The State Farmers' Institute at the Kansas Agricultural College is the place to get these things. December 26 to 30 will be the time.

For several years about a hundred of the leading swine breeders of Kansas have been holding conferences at the college during the farmers' week. This year these conferences will begin Thursday morning, December 28, at 8 o'clock, and continue all day. There will be special demonstrations in hog judging and a special demonstration in the use of anti-hog-cholera serum. All who expect to attend the conference are urged to write to George C. Wheeler, Manhattan, before December 28, as it is desired to arrange for a dinner Thursday night.

The Kansas Dairy Producers' Association will meet at the agricultural college Friday, December 29. Some practical exercises will be given in judging dairy cows, handling dairy apparatus, etc., and lectures will be given by Prof. O. E. Reed, D. S.



Like his mother used to make.

When you take a good look over Kansas you wonder why several thousand farmers do not gather at the college in the interesting days that follow Christmas. It's the time of their lives, if they only knew it. Meetings every hour, from early morning until reasonably late; stock judging, corn judging; the latest machinery on exhibit; men in the engineering building to tell you how to work every kind of engine and explain the troubles you are having with your own gasoline or gas power or pump or windmill; talks that everyone can understand on every subject that ought to be handled in such a place. What more could a farmer of Kansas desire? The boys' corn contests alone will be a big attraction. Thousands worked in these contests last summer.

FOR THE GIRLS.

And for the women and girls? Well, did they ever come to Manhattan and miss taking home something they didn't have before in the way of mental equipment? Not on your life. They'll have special lessons and demonstrations in cookery and sewing and other departments of household work, and there'll be the usual contests in which every girl is interested every winter. The program isn't nearly complete yet, in this respect; it will be a wonder though. Talk it over with the folks, girls, and see if you can't get to Manhattan this year. You'll be glad you came.

More inquiries are received at the agricultural college for pure-bred sheep than for any other stock. The sheep breeders can help themselves by more frequent meetings. Therefore, a meeting of The Kansas Sheep Breeders' Association has been called for Tuesday afternoon, December 26, at the agricultural college. There will be a session that afternoon, beginning at 2 o'clock, and others for several mornings of the week. A special program is being prepared for each session. Those who expect to attend advise G. C. Wheeler at the college.

Burch, dairy commissioner, and Geo. S. Hine.

It is hoped to have a large attendance of the dairy producers of the state and also of breeders of dairy cattle. Those who can do so will find it profitable to attend the entire session of the state institute. Professor Reed will have a regular three-day dairy institute, beginning Wednesday morning and ending Friday noon. All who are expecting to attend for the week, or for Friday only, are asked to write to George S. Hine at Manhattan, giving him the date.

The Kansas Veterinary Association is to meet December 27 for three days' session. In several ways this will be an exceedingly interesting meeting. The leading veterinarians of the state are to speak, and there will be demonstrations and clinics and a special institute to show how anti-hog-cholera serum should be used. The veterinarians also will visit Fort Riley to study the horse-feeding experiment in the stables at that post, in which several hundred horses are involved.

Here's the program of the Kansas Horse Breeders' Association for the meeting Wednesday, December 27: The first paper, at 8:30 o'clock, will be by Dr. F. S. Schoenleber, state veterinarian at the college. It will deal with infectious disorders of one kind or another of interest to horsemen. The other numbers are:

9:10 Diseases of the Horse Caused by Corn, Smut, Molds, etc.....H. P. Haslam
9:50 Uniform Classification of Horses at County Fairs.....T. G. Paterson
10:30 Review of the Work of the Stallion Registry Board. Dr. C. W. McCampbell
11:15 Future of the Horse Registry Association.....H. W. Avery

AFTERNOON SESSION.

2:00 Demonstrations of Unsoundnesses of the Horse.....Dr. C. W. McCampbell
3:00 Shoeing, and Care of the Foot.....Dr. K. W. Stouder

3:45 Special Work in the Study of Types and Breeds.....Dr. C. W. McCampbell

NIGHT SESSION.

6:30 Dinner.
8:00 Report of Horse Feeding Experiment at Ft. Riley.....Dr. C. W. McCampbell
9:00 Business Session.

MANY TAKE THIS "CURE"

THE WATERS SYSTEM OF MAKING MEAT IN DEMAND EVERYWHERE.

Surely Farmers Are Returning to "Hog Killin'" Day—From Maine to Montana Come Requests for the Formula—The Recipe Again.

Farmers must be returning to "hog killin'" day, sure enough. Else why should so many ask for details of the system used by Henry J. Waters, president of the Kansas Agricultural College, in curing and smoking meats? Nothing more interesting has come up in recent years. Within a month the demand for this kind of information has grown with the most remarkable rapidity. Since the directions were first printed, nearly a year ago, letters have never ceased coming. But recently, since work began on a slaughterhouse for the college, in which to work out all these details before the students—since the instituting of a course teaching this kind of work—the interest has increased amazingly.

HERE'S THE RECIPE.

Farmers in Idaho, Maine, Texas and in Montana, have written asking for directions, saying they had lost their original copies. Here, a little more fully, are the rules as used in President Waters' own operations of killing and curing: To 1000 pounds of meat take the following:

40 pounds of common salt
10 pounds New Orleans sugar
4 pounds black pepper
14 pounds saltpetre
1 pound cayenne pepper

Weigh the meat and take such part of the ingredients as that is a part of 1000. Let the meat cool thoroughly. After thoroughly mixing the ingredients, one-half of the amount should be rubbed well into the meat. Put the meat in a dry, cool place. Let it remain two weeks, then rub on the remainder of the cure and let it lie about six weeks, when it is ready to hang. In some states the meat may be put in a cellar, but only if the cellar be thoroughly dry. The rule "Never in a cellar" would apply to Missouri, but in Kansas one might easily have a suitable place under ground. Never use a warm or moist place.

RUB IT IN CAREFULLY.

It is important that the meat be well rubbed each time the cure is applied, and that plenty of the cure be forced into the hock end and around the joints. Less cure should be used on the thin sides than on the joints. The heavier and fatter the meat, the longer the time required for curing. The warmer the weather, the quicker the meat will take the cure. The best time to kill will be in cool weather after December 1 to February 1. You can kill in November if the weather is cool, but there is much danger that it will turn warmer again. Kill at the beginning of the cold wave. You will produce the finest flavor if you give the meat two or three months of cool weather, hanging, before the warm days come. About the right size hog is 175 to 225 pounds, and 180 to 190 pounds for a handy sized ham. You should have a March or April hog.

HOW TO TRY IT.

While in general a light straw color would indicate sufficient smoking, it is always safe to try a piece of thin bacon or shoulder to be certain that the process has been carried far enough to give proper flavor and cure. The hams may be kept one, two or three years without detriment, and will improve in flavor up to the end of at least two years. No deterioration will take place for even five years if a ham is properly cured.

Smoking should be done slowly. It should occupy four to six weeks, a little every day, and with little heat. Slow smoking gives a delicate flavor. After the smoking is finished wrap

each piece in paper, put in an unwashed flour sack and hang in a dry place.

The brine cure requires the same materials, minus the pepper. When the meat has cooled rub it with salt and let it drain over night. Pack in a clean barrel with the heavy pieces, hams and shoulders, at the bottom. For every 100 pounds use 8 pounds of salt, 2 pounds of brown sugar, and 2 ounces of saltpetre. Dissolve in four gallons of water and cover the meat with it. Thin sides should remain in this four to six weeks and hams six to eight weeks. After it has dried thoroughly smoke as in the dry cure. Shoulders should be cured with the hams. For eating until June 15 they are as good as ham, and cheaper.

How shall you determine just when the meat has been cured? Take one of the shoulders, saw off two or three steaks and note the color of the lean. If the inner muscles are turning a red tinge and the outer muscles are quite red, the indications are that it is sufficiently cured. It is best to fry these steaks. If the outside is a bit too salty and the inside not salty enough, it is time to quit curing. Hang it up for smoking. Here are a few figures showing what should be procured from a 250-pound hog:

35 pounds ham
30 pounds shoulders
25 pounds thick sides
21 pounds thin sides
30 pounds lard
40 pounds spare rib, head, feet, backbone
18 pounds sausage

THREE FIRSTS FOR KANSAS.

The Agricultural College Makes Winnings at International Show.

In competition with the best live stock in America, Harry of Naples, a Galloway steer entered in the International Live Stock Show in Chicago by the Kansas Agricultural College, was

NO NEED OF THE TONICS

LIVE STOCK BETTER OFF WITHOUT CONDITION POWDERS.

Feed Your Animals Properly and They Won't Lose Their Appetites, Says Professor Flint—What One Investigator Found Out About Tonics.

Feed your stock tonics along with their daily rations and they will grow faster, fatten quicker, and the cows will give richer milk. So say the manufacturers of tonics, otherwise known as stock foods, seed meals, and condition powders.

Is that true, Mr. Farmer? Do you find sufficient improvement in your stock to pay for these high-priced tonics?

P. N. Flint, assistant professor of animal husbandry at the Kansas Agricultural College, says animals properly fed and cared for do not need tonics. And he is supported by many other experts. Sir John Lawes, a great investigator in scientific agriculture, after several experiments at various experiment stations, said that he did not believe the farmer would, at the end of the year, be ahead any money from feeding tonics. Not only are the tonics of little value as feed, but you have to pay from 10 to 30 cents a pound for them.

In a recent test at the Ottawa experimental farms several teams were given a daily ration of fourteen pounds of oats and bran a day. To the feed of one-half of these teams was added tonics. It was found that those receiving the tonics made an average gain of twelve pounds each in 42 days, while those receiving only the bran and oats made an average gain of thirteen pounds each in the same time.

There are two classes of tonics. The first class has for its basis linseed



In the corn judging class.

awarded champion Galloway steer of the show this week.

In addition, Kansas won first in shorthorn heifers under one year old, and first in three-year-old Galloways.

Three "seconds," one "third," and one "sixth" also were awarded the fancy stock from Kansas.

Mary Copley Died Unexpectedly.

Miss Mary Copley, a clerk in the secretary's office, died at her home, 1203 Moro street, Sunday, December 3. She had been ill but a short time and her condition was not thought to be dangerous. The funeral was held Tuesday afternoon at the Presbyterian church.

Miss Copley was widely known among the students and faculty and liked by everyone. She was graduated in the class of 1906. Since that time she has worked as clerk in the post office and afterwards as clerk in the secretary's office.

meal or wheat middlings. The second class consists mainly of ground screenings, low-grade milling offal; or ground bark of trees. To these "fillings" is added a small per cent of such materials as common salt, charcoal, copperas, fenugreek, gentian, pepper, epsom salts, etc., with a little turmeric or iron oxide to color the mixture.

About the only value of these tonics is their appetizing effect. However, a healthy animal needs no appetizer and a sick one needs other attention than the improving of its appetite.

More Work for Bossy.

In 1870 each dairy cow was supposed to produce milk, butter and cream for 3.8 people; in 1880, for 4 people; in 1890, for 3.9 people; in 1900, for 4.5 people, and in 1910, for 5.1 people.

If new boots don't polish quickly, rub over with a piece of lemon.

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PRES. H. J. WATERS Editor-in-chief
PROF. C. J. DILLON Managing Editor
DR. J. D. WALTERS Local Editor

Except for contributions from officers of the college or members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism, under the direction of Prof. Charles Dillon.

The typesetting and other mechanical work is by students in the school of printing, of which J. D. Rickman is superintendent. Both these departments are in Kedzie Hall.

Newspapers and other publications are invited to use the contents of the paper freely.

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SATURDAY, DECEMBER 9, 1911.

WHEN FARMERS READ.

It has just come to our attention that certain editors do not believe in printing "farm dope" in the winter. "There is no farming in the winter," says one of our good friends. "We prefer to print holiday stuff, things about Christmas and turkey and all that, you know. Farm dope won't do now—not before spring."

Why, bless your simple hearts, men, this is the exact time, the accepted hour in which to reach the farmer. You couldn't pick out a better season for reading. These are the long, cheery evenings in the living room, the dining room or, it may be, the kitchen, when more reading is done than at any other time of the year.

And don't you go and make up your mind that the family is giving its whole attention to Christmas stories—don't you do that. Because you'll be mistaken. Do you, Mr. Editor, sit and read columns about the yuletide spirit and the joy of giving? Do you ponder for days and nights over what you are going to give your wife or her mother or your foreman, or some other dependent, or do you figure a bit on the affairs of the office and what you are to do next spring when you order your new linotype or cutter or stitcher? Don't give much thought to the holidays except to growl a few words—unmentionable here—do you?

Well, Mr. Farmer is a human being, too. He loves his family, just as you love yours, and he probably will give the several members something for Christmas, but he doesn't spend his time reading pretty yarns about Kris Kringle. He is interested in farming. You mustn't make him a creature of such poor brain that he reads only when the moon is right, or the temperature chances to be high enough.

How under the bending blue is the farmer to find time to read in the summer when farming is in active operation? Tell us that, if you can. Winter is his time. He reads, too. The mail that reaches the agricultural college proves how carefully he reads. This mail suddenly assumes gigantic proportions when winter comes. The letters contain every imaginable question touching farming. They were written in the afternoons and evenings, doubtless, because then—in the winter—farmers have time to think and figure and write. When summer comes the college mail from farmers is slim. The case is proved, Mr. Editor. It shows that farmers do read, and it proves that the newspapers of Kansas are doing a fine work in giving Mr. Farmer about what he wants. But they must not imagine that he stopped reading when the holiday spirit began to manifest itself—when the ads. began to come. Not much. Strange that farm papers don't cease publication right after harvest, isn't it?

REASON FOR THE DECREASE.

In some counties of eastern Kansas and in many sections of Missouri and Iowa the rural population is steadily decreasing. This decrease has been

going on in the older settled parts of the country for years. There are many reasons for the decrease, but the principal one is the land hunger of the farmers. There has been a constant tendency for the richer farmers to buy out the adjoining landowners. Large farms always mean a small population. This condition will be present until the demand for food from an ever-increasing population makes a larger acre production necessary. A larger acre production means more intensive cultivation, and this means an increase in the number of farmers.

An abundance of cheap land in the West also has aided in the decrease. Renters and others have believed there was a greater opportunity in the undeveloped West for the man of small means, and have left the older farming sections. This western movement has been aided by the influence of the land speculator. In many cases the land boomer has exerted a bad influence in the change from the undeveloped land to the settled community. And they have reduced the speculative handling of lands to an exact science. The speculator purchases his options on large tracts of land, advertises them, and gets home seekers' low rates on the railroads. He sells the lands as farms and his only object is the profit that he gets—and this usually is very large.

The attraction of the town for the country boys and girls has had an important effect, as in a great many cases it has lured the stronger and more self-reliant—the real leaders—from the rural life. This movement will be stopped just as soon as country life is made as attractive as city life, and it will not be stopped any sooner.

Increased efficiency in the modern farm machinery also has helped bring about the decrease. Fewer men are required under the usual extensive system of farming than are needed where the largest acre production is the aim. The higher price of labor has forced the landowners to use more complicated machinery, more horses, and more steam and gasoline power.

But conditions are changing, and the day of the small, well-tilled farm is almost here. And smaller, better-tilled farms mean a better country life.

F. B. N.

ENCOURAGING GOOD CONDUCT.

"The department of physical culture and athletics," said President Waters, in a recent speech, "should, in effect, be a department of proper conduct—conduct based on the principle of the Golden Rule. No other such opportunity is offered for the guidance and direction of the conduct of young men and young women as that open to this department. To teach them to act uprightly under the most trying circumstances; at times of greatest physical as well as mental stress, and when all restraint is removed, except that which we seek to make automatic; when all else is forgotten in the desire to win, is a rare opportunity indeed."

"This is, in fact, what you do when you soundly inculcate the doctrine of standing for what is right even though it may mean defeat and apparent failure."

Doctor Day once said that when he assumed the duties of chancellor at Syracuse University there were no facilities for athletics. When he urged the establishing of a field and the building of bleachers, etc., the president of the board, a vice-president of the Standard Oil Co., asked him what he wanted these things for, and he replied, "So the students may work off their surplus energy on themselves, and not on me."

Any one who has had executive responsibilities at once will appreciate the wisdom of Chancellor Day's answer. Any one with even the slightest acquaintance with college students knows that they have surplus energy, which cannot be suppressed. "Moreover," President Waters said, "it would not be wise to suppress it, were it possible to do so. But while it is allowed full swing it should be most carefully directed."

"The notion is all too prevalent in our colleges and universities that it is not necessary, and indeed it is not

A GOLDEN TEXT.

Blessed is he that considereth the poor: The Lord will deliver him in time of trouble.—*Psalms 41-1.*

desirable to distinguish one's self as a student to be best fitted for subsequent success, or to acquit one's self most creditably in college.

"Undoubtedly the emphasis laid upon athletics has had as much to do with the creating of this sentiment, and even in keeping it alive, as perhaps have all other causes combined."

THE FARMERS' CHANCE.

A real opportunity is before the farmers of this country to-day. This is a chance to get into the pure-bred cattle business, and get in on the ground floor. A liquidating process has been going on in this line for some time. The price for high-quality animals is below normal. Prices are certain to advance in the future.

The population of the United States is increasing at the rate of about one and one-half millions a year. This population must have meat. The great cattle ranges of the West are being broken up by the man with the hoe. This means that meat, in the future, will be produced on the high-price lands of the smaller farms. It can be done, too. The average value of meadow land in France is \$176 an acre, and one head of cattle to every four acres is the rule in that country. In

"To the Victor—"

If a man can write a better book, preach a better sermon, or make a better mousetrap than his neighbor, though he builds his house in the woods, the world will make a beaten path to his door.—*Emerson.*

England the price is much higher, yet England has one head to every five acres. In the United States we have one head to every fifteen acres.

The maintenance of fertility of the soil is of supreme importance to the future welfare of the country. A rational system of live-stock farming is the best system. The farmers of Europe have realized this and they give special attention to meat production.

In England two-thirds of the farm land is in grass. In America the number of cattle could be increased materially and the grain production kept at its present great total because the farms would increase in productivity.

The value of pasture land is increasing rapidly. Take for example the increase in price in the great pasture belt of Kansas, in Woodson, Greenwood, Butler, and adjoining counties. Fifteen years ago this land was selling for about \$10 an acre. To-day the price is from \$25 to \$30 an acre and even higher in some places. And it is increasing in value rapidly. The increase has been even more marked in some other regions. It never will pay to keep animals that are not efficient meat producers on the high-priced lands of Kansas.

There is a great interest in pure-bred stock among the stockmen at present. The business is certain to grow rapidly in the future, and the man that gets in now will get into a good line.

F. B. N.

THE FARMERS' SHORT COURSE.

No farmer, no matter how wealthy, can afford to have his boys loitering all winter on the farm. With some fathers the spending of a few dollars is not a matter for worry, but if this spending involves results that will last a lifetime then it is up to them to control it. It may be that many fathers have given some thought to how much time and money their sons waste every winter in town. It may be that they have investigated the pool-hall evil and the other ways of going wrong that are certain to be in the path of an idle boy.

Wouldn't it be better to have this boy spend \$50 or \$60 in paying his ex-

penses while taking the farmers' short course? He wouldn't spend much more than that for room and board, and that's the only money he would need, except the \$3 fee for the ten weeks' term required by law. It seems, to a careful, thoughtful observer, that this is a rather fine chance for a farmer's boy.

Moreover, the time will not only be well occupied in taking the boy out of bad company, but it will give him, also, a lot of extremely valuable instruction about things he needs to understand. He will find the work in college cut out to his measure. He will be interested from the first day, and the chances are—as experience has proved—that when the ten weeks are over he will be eager to return to college for the next term. It is a good thing to think about.

THE KANSAS BOOSTERS.

It is just barely possible that in the rush and hustle of pre-Christmas days—the natural impulse to get your shopping out of the way, wondering, all the while, if what you bought cost more than what you are to receive—it is just possible that you overlooked the fact that in Chicago is a little group of fine fellows at the land show telling the world a lot of good things about Kansas. You didn't know it, perhaps, or if you did you didn't worry about it. Such things should be taken care of by those who are paid to do it. Certainly. What right has anyone cavorting around here stirring up trouble?

The Man Behind the Plow.

They sing about the glories of the man behind the gun.
And the books are full of stories of the wonders he has done;
There's something sort of thrilling in the flag
that's wavin' high.
And it makes you want to holler when the boys
go marching by;
But when the shoutin's over and the fightin's
done, somehow,
We're still dependin' on the man behind the plow.

In all the pomp and splendor of an army on parade,
And through the awful darkness that the smoke of battle made,
In the halls where jewels glitter and where shoutin' men debate.
In the places where the rulers deal out honors to the great,
There's not a single person who'd be doin' business now,
Or have medals, if it wasn't for the man behind the plow.
We're a-buildin' mighty cities and we're gainin' lofty rights,
We're winning lots of glory and we're settin' things to rights,
We're showing all creation how the world's affairs should run;
Future men will gaze in wonder at the things we have done,
And they'll overlook the feller, just the same as we do now.
Who's the whole concern's foundation—that's the man behind the plow.

S. E. Kiser in *New England Farmer.*

SUNFLOWERS.

We were pained to note that in a neighborly write-up of Brother Coburn's alfalfa effusion the editor of a Certain Paper referred to the bank notes as "crisp."

We notice, with keen regret, that the McNamara pleas of guilty were received by certain persons "Like a bolt from a clear sky." Journalism 1, 2, 3, and 4 please note.

Now that the state board of health is to fix a standard for mince meat, it might go a bit farther and settle, once for all, just what shall be considered a legal tender in making hash, during the holidays.

The women of Lincoln, members of the Civic Improvement Club, petitioned Judge Grover asking that during the "Tar party" trial he exclude reporters and "miners." Didn't want anyone to dig into the case, perhaps.

If Mr. Lincoln Whiskers Steffens knew so much about the crimes of "Big Business" that he could force it to help him get a "let up" on the McNamaras, why didn't he insist upon "Big Business" being indicted, also?

The Ottawa Republic is rejoiced to know that Gertrude Hoffman really is to appear in her show this year. The Republic may be further assured that it is a performance easily understood—nothing, in short, that you can't see through.

Thirty-three Kansas counties have no bonded indebtedness, and the fact is being heralded everywhere, instead of being concealed, as it should be. If you want the answer to this examine the roads and schoolhouses in those counties.

"Red Hats for Eighteen Today," heading the news of the creating of a bunch of cardinals, reminds us of the scare head run, many years ago, in the Chicago Inter-Ocean when Mgr. Satolli was elevated. It was "A Red Hot for Satolli."

A robber entered a bank near Vancouver, B. C., a few days ago, demanded \$1000, received the exact amount and went away, or, as the news dispatch said, made good his escape. It is believed his wife intends to do her shopping early this year.

A certain otherwise rational paper, published weekly for \$1.50 a year, has started a series of articles, by some village antiquarian, on "More About Creation." If the writer should miss one week we can fill the gap with "More About Rotation," or "A Few Hints on Back-Yard Farming."

Mr. Faxon should not take it so much to heart. Time was—and long before he had blessed Western Kansas with his presence—when it looked as if we should all have to eat Russian thistles. Editorials won't kill them, Ralph, any more than they will make soft water or concrete bridges.

Walnut, Kan., is the real, democratic, Jeffersonian simplicity simplified. The Erie Record says: "The citizens of Walnut are quiet and unassuming. The president of the bank there walked across the street with the writer." What do you think of that, now? Right out in the street, mind you.

ALUMNI NOTES.

A. E. Immenschuh, '09, now farming near Arlington, Kan., called on old College friends this week.

Mr. and Mrs. D. E. Lewis, members of the '10 and '07 classes, are the parents of a nine-pound boy, born December 1. Mr. Lewis is assistant in horticulture.

Dr. G. M. Logan, '02, and his brother, Dr. Ed. Logan, of Wamego, visited the college recently. They spent Thanksgiving with their sister, Mrs. E. P. Immenschuh in Manhattan.

F. J. Turner, foreman of the Ogallala Experiment Station, expects to enter the college, winter term. He will take special work in agronomy and horticulture.

Col. Albert Todd, U. S. Army, retired, class of '72, and Mrs. Todd, are spending the winter in Munich, Germany. They do not intend to return to the United States until late summer or early fall of 1912.

C. C. Witt, engineer for the Kansas Public Utilities Commission, addressed the local branch of the American Institute of Electrical Engineers, Tuesday evening, December 5. His subject was "The Regulation of Public Service Corporations."

Alumni of the Kansas Agricultural College at Wabaunsee, Kan., had a lively reunion, November 23, at "Bonnie Brae," the home of Mr. and Mrs. W. L. Cotton. Twenty-two grads enjoyed a very pleasant evening.

In a short business session George Kramer was elected president of the association; Hattie Noyes, vice-president; Robert Mosely, secretary-treasurer; E. L. Cottrell, corresponding secretary.

Those present were: Mr. and Mrs. W. L. Cotton, Mr. and Mrs. Henry Willig, Mrs. William Mitchell, Mrs. Robert Enlow, Misses Founash, Anna Smith, Adelle Conrow, Elizabeth Cotton, Hattie Noyes, Grace Bolton, Martha Cottrell, Messrs. Robert Mosely, George Kramer, Frank Perry, Charles Willig, Arthur Noyes, J. C. Bolton, William Bolton, Ernest Cottrell, Roland Cotton.

To Alumni in Oakland, San Francisco, and Vicinity.

The alumni and friends of K. S. A. C. are planning a reunion and banquet at St. Marks Hotel, Oakland, the evening of December 30, 8 o'clock sharp. There will be plenty of "eats" and an interesting program. Try to be with us. We are going to forget dull care, renew old-time acquaintances, and talk about old college days. All friends of the college, and their husbands or wives, are cordially invited. Expenses will be \$1.50 a plate. Send reservations to A. J. Reed, 5980 Colby street, Oakland, Cal. Do it now.

DO YOUR SHOPPING WISELY.

Don't Buy a Carpet with Bold Figures for the Living Room.

Every woman should consider her room carefully before buying furnishings. The tendency of some women is to buy something they admire regardless of the color, size, or shape. Here are a few suggestions to jot down before buying:

When choosing wall paper, the color and figure should harmonize with the room. If the room is in the south part of the house, use cool colors, such as blues, tans, or light greens. If it is a north room use warm colors, such as brown, green, or red. If the ceiling is high, never use striped paper.

A carpet must harmonize with the wall paper and the finish of the wood-work. Do not buy a carpet with bold figures. It grows tiresome and is hard on the nerves, especially if it is used in a living room.

The furniture should be plain, with as little carving as possible. It will not require so much time in keeping it dusted.

The proper kind of pictures add much to the looks of the room. For a living room pen and ink sketches and

quiet nature scenes are good. If fruit pictures are desired for the dining room, have whole fruit. Any picture that has the fruit opened, with, probably, a knife at the side, or a picture of a rabbit, bird, or something similar hanging by one foot, will unconsciously work on a person's nerves.

The aim in choosing any article for the house is to get something that is good and yet not have some characteristic that will grow tiresome.

MILO, FOUR TONS AN ACRE.

The Result of Advice Sent Out in July by Professor Reed.

When the drouth was at its worst, last summer, a suggestion was sent out from the Kansas Agricultural College by Prof. O. E. Reed, of the dairy department, advising farmers to cut corn that was tasselled and about to fire, and put it into the silos. Professor Reed admitted that such silage would not have the best feeding qualities, but stock would eat it and do well on it. The chief requirement was to keep it sheltered from rain. If the

I know of no pursuit in which more real and important service can be rendered to any country than by improving its agriculture.—George Washington.

corn then on hand was insufficient, Professor Reed advised the planting of milo or ninety-day corn. Corn or kafr, he said, could be listed in fields that had been in oats or wheat and, if a little rain fell to germinate the seeds, it would give silo crops for fall.

The value of Professor Reed's advice is indicated in the report, just issued from his department, showing the yields of milo sown July 29. This milo was put in for the exact purpose described in the drouth circular. Professor Reed says in his report:

"The yield of milo-maize sown July 29 was four tons an acre. The kafr corn yield was four and two-tenths tons an acre. These crops were used for silage and were harvested for this purpose October 15.

"While these crops do not make as good silage as crops that have become mature, the cattle like it and do well on it."

\$500 TROPHY HERE AGAIN.

Prize Won by Stock Judgers on Exhibition in Library.

The trophy won by the stock-judging team of the Kansas Agricultural College is on exhibition in the stack room of the library.

Since 1907 this trophy has been given by the Kansas City Stock Yards Company, of Missouri, to students of agricultural colleges. Iowa was the first to win it. Kansas won the trophy next, and Missouri won it in 1909. From Missouri it went to Iowa again for a year. So far, Kansas and Iowa each has had it two years. The college winning it three times in succession keeps it.

Shortage of Fat Cattle Now.

Cattle are selling for nine cents. Men interested in the industry predict ten-cent cattle before spring. There is one of the greatest shortages in fat cattle this fall this country ever passed through. The break in the market that was looked for on account of the drouth did not prove very serious.

Many of these cattle were moved, but on account of the demand they found a ready market. The late rains improved the corn to such an extent that large numbers of cattle are being fed. Every indication points to a good year for those who are feeding cattle.

Many Maps Printed.

The engraving and printing division of the United States Geological Survey is turning out a large amount of high-grade map material, much of which is printed in many colors, some of the lithograph sheets requiring 15 or more impressions. During October the presses delivered a total of 421,928 maps and charts, which represented over a million impressions.

SELL THE LOAFING HENS.

YOU'LL LOSE MONEY IF YOU FEED THEM THROUGH THE WINTER.

Maybe There Are Too Many Hens in Your Poultry House, Anyway—Disease Will Do Damage in Overcrowded Quarters This Winter.

A loafing hen is like a loafing man—not a money maker. Profits and labor of others are eaten up and there is no return. You dare not kill a lazy man, but it is possible and profitable to kill the lazy hen.

If the hens are refusing to pay for their board with eggs, or chicks, you can make them yield some profit by slaughtering them. Drones cannot profitably be kept by anyone interested in poultry keeping. Old hens are usually the most common tramps. They begin laying late and quit very early. Unless they are valuable as breeders, or are fed especially for marketing, old hens seldom can be made asset producers. Weed them out.

DON'T OVERCROWD THEM.

There's another chance in the poultry business, usually, to use the thinning process. It's the danger of overcrowding when you have decided upon winter quarters. A lot of useless, unprofitable birds are simply a menace to the health of the entire flock and must be disposed of. If you do not have sufficient room to house, properly, all your birds—and do not care to build more room—it is much better to sacrifice a few birds than overcrowd. To pack them in a small house means disease, then death and disaster.

Watch your hens for late molting. Those that molt late very seldom lay well in winter. To be good egg makers in winter they must have gone through the molt and be done with it in time to gather strength before the cold days come. Dispose of any hens inclined to be anti-molting or only half molting.

FROSTED COMBS AND FEW EGGS.

If a sudden cold period has caught you napping and by your carelessness the hens were frosted on the toes, or wattles, or combs, more eggs will be missed sure. A hen, once frostbitten, becomes fastidious, and refuses to labor much until spring. It is useless to criticize her and foolish to abuse her. The best thing to do is make a savory roast or a sale.

Do the weeding out carefully. Don't try hit-or-miss methods. Make or buy some trap nests. These will do the work. They will detect the non-layers quicker than any other method. The trap nest is to the poultryman what the Babcock test is to the dairyman.

Be careful about feeding, too. If your hens get too fat: few eggs. If they are not fed well enough: no eggs. So feed what hens you do keep, correctly. And make them scratch for their feed. It makes them more ambitious.

JAPANESE ART FOR STUDENTS.

An Exhibit in the Department of Drawing Now Is Being Sold.

Samples of Japanese art have been used by Miss Charlotte Morton, assistant in drawing at the Kansas Agricultural College, for demonstrating to her classes this term.

These samples were sent her by a Japanese student, P. F. Isobe, of Madison, Wis. They were to be used for demonstrating purposes, after which they might be sold, Mr. Isobe said. Japanese art stands very high in the art scale of the world. From the beginning Japanese children are taught the blending of colors, and when grown up they usually are well trained along this line.

These pictures were placed on sale recently and were bought eagerly by students.

LOOKING UP "AGRONOMY."

A Freshman Talked Above the Heads of "Real" College Students.

One freshman in Agronomy at the Kansas Agricultural College hails from Iola, Kan. Most of the young

men and women from there have, in years past, attended colleges other than industrial in their work. Sport was made of a course in farming.

"Why don't you go to our school," exclaimed one young man, "and get a real college education?"

"That's just what I am doing," replied the freshman. "Have you 'real' college students ever been out to Manhattan?"

"No, we haven't."

"Don't you know farming, as taught there, is as much a profession as practicing law or medicine? You don't even know what agronomy means, do you?"

The discussion was ended. They didn't.

Economy.

I used to get my dinners
At the restaurants and such;
The check the waiter brought me
Was usually this much—
\$2.80.

But now, since I've discovered
The joys of wedded bliss
My Mary gets the dinners—
The cost for two is this—
\$0.63.

However, there's a gas range
That ornaments our flat;
The way that Mary runs it—
Brings monthly bills like that—
\$43.20.

—Milwaukee Daily News.

WHAT ONE GIRL WEARS.

A Letter from San Diego Starts a Debate—All Ready for the Entries.

Under the headline "Not a Thing to Wear," THE KANSAS INDUSTRIALIST published a story, November 18, in which it was asserted that few college girls now have "best things," but, instead, usually wear about as good clothing Monday as they wear for Sunday. Here is a letter, received this week, from California, on this point. The writer's side of the question is decidedly interesting:

To The Kansas Industrialist:

In your paper issued November 18 was an article under the heading, "Not a Thing to Wear." I am eighteen years old, a student in the California State Normal School of San Diego. My everyday school dress is a plain dark blue, grey or black skirt, a white shirt waist with full-length sleeves and either stock or Eton collar, and dull leather shoes with heels of medium height.

As I started to school yesterday my grandmother asked, "Do the other girls dress better than you, or do all wear shirt waist and skirt?"

"Some of them," I replied, "do, indeed, dress better than I, but mine is the general style."

Of a class of fifty, eighty per cent were thus dressed.

In this class are girls of the wealthiest families. Some of the waists are of soft silk, or daintily embroidered lawn, while mine are of linen; some of their shoes cost five dollars and mine were three-fifths; but the conservatism of the style remains the same. A number of them wear, simply, embroidered suits of linen; many plain, woolen-cloth suits are in evidence, the style most in favor now being quite plain with collar, cuffs and trimmings of a contrasting shade of satin. Some of these are last winter's Sunday suits doing service as school suits now.

Concerning the wearing of "Sunday best" to school, let me say that I think it the exception rather than the rule. I remember a girl in high school who did this and I have heard other girls say, "Oh, I might do so if I wanted to, but I'd rather not," and I'm sure that this girl's position among her schoolmates was not raised in the least by this display of dress.

This brings me to another important point: A girl's standing is not established by her clothes. My parents are not wealthy and I never dress extravagantly, yet I have hosts of friends, among them some very wealthy and some poor girls. I know that they like me for what I am, not for the sort of clothes I can wear.

I am glad to say that I honestly think, despite these terrible waves of hobble skirts, immodest waists, and atrocious hats, that girls are arriving at a period of saner dressing, especially in the matter of school clothes.

I have merely given you a few views on the subject from my standpoint. Tell your college girl to think it over once more, and if she wants to discuss it further to write to me. Here is a chance for a friendly debate.

HETTEE MALLORY,
San Diego, California, November 23.

Made White Again.

To whiten handkerchiefs that have become a bad color by careless washing, soak them over night in a solution of warm water, to which a little pipeclay has been added, and they will become beautifully white, says the Louisville Herald. Powdered borax is also another good remedy, the borax being added to the water in the same

LOOK INTO THE CELLAR.

IF IT'S DAMP AND MUSTY YOU'D BETTER ACT PROMPTLY.

Arrange for a Cross Current of Ventilation
—A Thin Layer of Cement on a Bed
of Cinders Makes a Good
Floor.

Better have no cellar at all than one which tends to make the whole house unhealthy. This is the statement of Miss Ella M. Nash, lecturer on home economics in the extension service of the Kansas Agricultural College. Miss Nash has had a good opportunity to study the household conditions in all parts of the state in her work at grange meetings, farmers' institutes, and movable schools. All over the eastern and central parts of the state, Miss Nash says, the heavy rains at certain times of the year cause the ground water to rise very high in the soil, and as a result every poorly constructed cellar is flooded and made unhealthy for the rest of the year. It is too often the case that the cellar walls and floor are of dirt, and the windows, if there are any, are a foot below the ground level with merely a small pit dug in front of them. Some persons, says Miss Nash, seem to have made a firm resolve never to open their cellar windows; the little openings in front of them are filled the year round with leaves and trash.

BEWARE THE DAMPNESS.

The two chief sources of danger from a dark, damp, unlighted, ill-ventilated cellar are the germs arising from decaying vegetables and fruit and the dampness which permeates through the first and second floors and even the attic of the house. While the dampness is the greatest source of danger, it really is dependent upon the second condition for its existence, as the decay is a result of dampness in most instances. It has been correctly estimated that one-half the damp, germ-laden air from the cellar rises through to the first floor and one-third to the second and one-fifth to the third.

The ideal or perfectly sanitary conditions as suggested by Miss Nash require first of all that the house be high enough above the ground level—at least two and a half or three feet—so there can be plenty of windows in the cellar on a level with the ground. Also, it must be possible to open the windows. They should be arranged opposite each other in the walls so that there will be a cross current of ventilation. In eastern Kansas, especially, it is absolutely necessary in building a sanitary cellar to have a solid rock or concrete wall running clear down to the bottom of the excavation. If this is not done the ground water surely will get in and the conditions will be nearly the same as if there was no rock or concrete in the wall at all. Even where a solid wall is put in it should be given a light coat of tar in order to make it absolutely water proof.

A FLOOR OF CLAY.

Absolutely the only permissible dirt floor for a cellar is one of fine, well-packed clay. And this only in the dry parts of the state. In preparing the best floor, two to four inches of cinders should go in first, and after they have been thoroughly tamped down a three-quarter inch layer of cement will complete the job.

When the walls, windows and floor have received the attention suggested, the cellar should be ready to submit to a division into at least two rooms—one for the butter and milk and the other for vegetables. Butter and milk absorb other odors readily, so it won't do to keep vegetables in the same room with them. All barrels and boxes in which fruit and vegetables are stored should be raised somewhat from the floor so that the air can circulate freely below them. In houses having a furnace there should be a third division for it.

People accustomed from infancy to lie down on feathers, have no idea how hard a pavingstone is without trying it.—Charles Dickens: Hard Times.

WASH BOARDS TO GO NOW

COMMUNITY LAUNDRIES ARE URGED
BY MISS FRANCES BROWN.

By this Plan All the Washing for a Neighborhood Is Done at One Place by Modern Machinery—The Cost of Equipment.

Ever since community laundries in the country were suggested at Iola, a few days ago, by Miss Frances Brown, lecturer with the Kansas Agricultural College, the college has been besieged with letters asking about the plan. How much would it cost? How many families could be accommodated by one? What kind of a laundry would it be? Would it wash the clothes whiter than the ordinary machines do? Would it be likely to tear the clothes much? And would it launder men's collars as good as they are done in town?

SHE HAS THE FIGURES.

All these questions, and more, Miss Brown is answering. She has figures, now, on the cost of equipping two small laundries—one for \$123.62 and the other for \$429. The estimate for the cheaper laundry is not an attempt to give the lowest possible cost at which a laundry could be equipped, but the lowest estimate for a laundry which Miss Brown can recommend to give satisfactory results. Here are the figures:

CHEAP EQUIPMENT.

Gasoline engine $\frac{1}{2}$ to $\frac{3}{4}$ horsepower.....	\$ 50.00
Power washer with wringer.....	30.75
Water heater, 4 gals. a minute.....	28.75
Wash boiler, copper.....	2.50
Gasoline hot plate, 3 burners.....	5.00
Stationary tubs, 2 compartments.....	7.37

IDEAL EQUIPMENT.

Steam engine, 2 horsepower.....	\$ 74.00
Steam boiler, 2 horsepower.....	68.00
Strong power washer, 24 in. x 24 in.	65.00
Strong power wringer, 17 in. x 34 in.	40.00
Mangle, gasoline, 37 in. x 4% in.	100.00
Drying room, 2 racks and \$10 pipe.....	60.00
Stationary tubs, 3 compartments.....	22.00

\$123.62

When the laundry is ready to launder, the women can go to it on the day assigned them and by the use of the modern equipment will be able to do the whole family washing in two or three hours, with no discomfort and very slight expense.

LET THE KIDS RUN IT.

The laundry may be owned by the community, or it may be owned and managed by some individual who may rent the building and equipment to his neighbors. Or he may contract to do the washings himself. For instance, a farmer may have two or three girls and a boy who desire to go to town and clerk in the village stores. He might buy the equipment for a community laundry and let the children run it. This would be much better for them than clerking at \$4 or \$5 a week in a general store. They would make money and the community in general would be benefited. A laundry of this kind could do the work of every family for miles around.

The cheap equipment would do just as good work as the other as far as it went. Of course, without the steam there could be no drying room, and the work of a laundry of this kind would be limited to what is termed "wet wash." Even this would be a great help to the women on wash day. Each family would have a certain time on a certain day assigned to it for doing its washing. In one hour the whole family wash would be back in the basket and started home to be hung out to dry, and then be ironed at leisure.

READY TO WEAR.

When the more expensive or ideal equipment is used, however, the clothes would go home, washed, dried and ironed; in fact, "ready to wear." Thus it would seem that, where it is possible, this entire equipment should be installed, or have the laundry run as a side issue with a creamery. In a plant having complete equipment, where each family uses the machinery, and does its own work, a complete wash should be turned out in two hours, or three at the outside, allowing one hour for drying.

Running a laundry of this kind in connection with a creamery would lessen the expense a great deal. The equipment for furnishing the steam and

hot water would already be installed, and it cuts a pretty good slice out of the cost. The washers, wringers and mangles are all that would be bought.

CHURCHES CAN HELP.

The country church should be, and in many cases is, the center for community gatherings. Several country districts in Kansas are considering the advisability of having a community laundry near the church, the business of the laundry to be taken care of by a board of directors, elected by the church community. To the casual observer this would seem a very sensible plan, as the church community gives a good base of operations for the other.

AN ACTIVE SCIENCE CLUB.

The Meeting, Last Monday Night, Was Largely Attended, and Interesting.

Nearly everyone, perhaps, is interested in dairy cows and their products.

When these subjects are discussed intelligently, as they were in the meeting of the Science Club, Monday night, by Prof. O. E. Reed, the interest is doubled and the value of the discussion very largely enhanced. It is

A Bit of Silo Talk.

The great lesson taught in Kansas this year is the value of the silo. Dairymen who have had alfalfa hay and ensilage for their cows have escaped the high cost of bran and corn chop, which is needed when prairie hay is the fodder, or when the corn fields have become poor picking.

The next improvement the Kansas farmer should plan for is the silo. Then land worth \$100 an acre will not be too valuable for cattle breeding! If all the forage can be preserved in the form of ensilage, which is the fodder put up at just the season to save all its tender qualities, then the farmer has a rich feed which will not only produce milk, but it will make beef, reinforced with corn, oil cake, or ground kafir.

Next to the silo must come the kafir grinder. The two, with all the available land in alfalfa, will afford a paradise for feeding cattle and hogs.

With the feed in sight, the milk, beef, pork and mutton business cannot help proving profitable.

—Editorial in *The Wichita Beacon*.

very regrettable that a paper so pertinent could not be published in the space at command.

Another subject of paramount importance, discussed by Prof. E. L. Holton—and, afterwards, by many others—was "Vocational Education." Professor Holton had charts and figures so plainly prepared that their significance was impressed upon everyone. The address was listened to with much attention. Everyone who has a boy or a girl in the public school is keen to observe and study the peculiarly idiotic systems used in some of these schools.

The program for the Science Club's new season has not been announced. One or two noted speakers probably will be provided this winter.

The Quicksilver Production.

The world's production of quicksilver last year was 3747 short tons, of which the United States produced 773 short tons. Quicksilver usually is quoted in "flasks," a flask containing 75 pounds. The American production therefore represents 20,601 flasks. Of this amount California furnished 17,211 flasks. In 1850 the quicksilver production of that state was 7723 flasks, but California's greatest production was in 1881, when the yield was 60,851 flasks.

In 1910 only two countries produced more quicksilver than the United States—Italy 882 tons and Spain 1102 tons. These and other statistics are given in an advance chapter on quicksilver from *Mineral Resources of the United States, 1910*, by H. D. McCaskey, of the United States Geological Survey.

PRUNE, BUT DO IT RIGHT

KNOW WHICH LIMBS ARE USELESS AND WHICH VALUABLE.

Apple Trees Should be Kept Low and Open so Spray and Light May Reach All the Limbs—Pruned Trees Easy to Pick.

Pruning done correctly will increase the size and improve the quality of most common fruits. The expense of picking will be lessened and the expense of handling will not be so great, because there will be more of the first grade and less of the poorer grades of fruit. Then the results of spraying will be more satisfactory and, if the tree has been pruned, injuries to the wood and fungous pests are not so likely to be present. This was the information given a few days ago by D. E. Lewis, assistant in horticulture at the Kansas Agricultural College.

CUT OUT DEAD WOOD.

The object of pruning, Mr. Lewis says, is to obtain as much good fruit as possible from as little wood as possible; to change the tree from an undesirable to a desirable shape; to rid it of disease spots and dead wood, and to open it to admit light and air. Fungous growths develop best in dense shade. Pruning makes conditions unfavorable for them because light is admitted. But care must be taken that direct sunlight does not reach the larger limbs for too long a period every day. That may cause "sun-scald."

It is important, before trying to prune, to know where and how the fruit is borne. Then enough bearing wood to produce a good crop the following year should be left. This may be done and the tree made the desired form at the same time. Apples are borne on wood two or more years old, while peaches grow only on one-year wood.

TO PRUNE PEACH TREES.

The apple tree should be kept low and open so the spray may reach all the limbs easily and the fruit be gathered easily.

You may take advantage of a year when cold has killed the fruit to rid peach trees of all surplus wood. They will stand a great deal of pruning and should be cut back so as to have just as little useless wood as possible. The larger limbs may be left as stubs, but there should be plenty of one-year limbs left to renew the top.

Cherry trees do not need so much pruning, but it is well to keep the tree in the proper shape with the top fairly open so that insecticides and sprays may be applied if necessary. A knowledge of the variety is needed to insure a proper pruning of the plum tree.

Those Busy Tuckers.

Esthol Jones visited with the Tucker boys Sunday.

William Tucker called on the Olson boys Sunday.

Fred Charles was a caller at L. O. Tucker's Monday.

Hobart Tucker was a caller at the homes of Fred Charles and Mr. Hurd Monday.

Master David Graves was a caller at the homes of Fred Charles and L. O. Tucker Monday.

William Tucker was a caller at James McCoy's, near Larned, Monday.

Mr. and Mrs. Sidebottom took dinner with L. O. Tucker and family Tuesday.

J. C. Weaver and wife visited with L. O. Tucker and family Sunday.

—Larned, Tiller and Toiler.

So Kind of William.

William Pyle handed us a dollar on subscription the other day. Mr. Pyle is one of the very earliest settlers of Kansas, locating near Lawrence long before the war, when he was a boy. A true sketch of Mr. Pyle's life would make mighty interesting reading. He knew many of the famous men of the West in the early days.—*Elk Horn Citizen*.

To keep tins from rusting, it is a good plan to place them near the fire after they have been washed and dried.

THE Wasted Days

of winter could be made to pay big dividends if rightly used.

The Way Out

May be found in the Farmers' Short Courses to begin January 3, 1912. They continue for ten weeks—weeks that, ordinarily, you idle away—and give you, if you take advantage of the chance, A CONDENSED COLLEGE COURSE.

In the Winter Short Courses

You can study the things that are of extraordinary importance to you. The work is arranged especially for you. You have your own classes, your own hours for laboratory work—that's the practice period—and you take back home a lot of information that might not have come your way in a lifetime.

Remember the Date: January 3.

Incidentally:

Don't forget to attend the Annual State Farmers' Institute this year. It is to begin December 26—the day after Christmas—and close the night of December 30. Home for New Year's Day. The Director of College Extension, Box G, has charge of this feature.

For Information About the Short Courses Write:

H. J. WATERS, President,

Kansas State Agricultural College
Manhattan, Kansas, Box Q.

SAVE RAIN—\$1 AN ACRE.

PLOWING AT THE RIGHT TIME STORES THE MOISTURE.

Surplus Water, Kept in the Subsoil, Will Rise to the Surface in Time of Drouth—Three or Four Inches Enough.

Some men flirt with the weather—take chances with moisture conditions—and then wonder why they aren't more of a success on the farm. If they would save the extra rainfall a large quantity of water would be stored in the subsoil for immediate use in case of dry weather.

If a farmer doesn't practice moisture conservation and raises a good crop, his neighbor across the road, saving the surplus rainfall, will have a larger yield. Reverse the moisture conditions—a dry growing season—and the chances for a crop favor the man who takes care of the water that falls on his farm.

Three or four inches of rain carried over from one season to the next means three or four hundred tons of water an acre in the subsoil—water enough to carry a growing crop through any ordinary dry weather. It is possible to carry even more than this from one year to another, says A. H. Leidigh, assistant professor of crops at the Kansas Agricultural College.

How can the rainfall be saved? Plow the field as soon as the crop has been harvested. If it is spring or summer follow the plow with a drag. The rains will soak into the soil instead of running off the surface or evaporating. Fall plowing should not be dragged, as there is danger of the soil either packing or becoming dry and blowing.

The extra expense of following such a plan ought not to cost more than a dollar an acre at most. Many places it could be done at a much smaller

cost. It pays big interest on the investment even at the higher figure. While moisture conservation doesn't spell sure cure for crop failure, it is worth the effort.

A VISIT FROM JAMES T. JARDINE.

The Agronomist's Brother is Connected with the United States Forest Service.

James T. Jardine, of Washington, D. C., was in Manhattan for a few days, this week, visiting his brother, William M. Jardine, professor of agronomy. Mr. Jardine is connected with the United States forest service. For eight or ten months of every year he is in the Far West, chiefly in Oregon, Washington, and other western states. His work, in some respects, is out of the ordinary. Much of his time is given to investigations of grazing possibilities in certain parts of the forest reserves; the practicability of fencing in pastures, instead of allowing sheep and cattle to run at will, and in preparing topographic maps of his territory showing at a glance exactly what sort of feed live stock may find on a specified tract. Mr. Jardine left here for Washington.

NEEDED THE DINING COURSE?

Some Persons do not Realize Their Danger Until Too Late.

Wichita, December 1.—While eating their Thanksgiving dinner at home near Vesper, thirty miles southeast of this city, Mrs. J. W. Silvers used a case knife, and the blade being sharp cut off an inch of her tongue. As there was some delay in getting a doctor, Mrs. Silvers almost bled to death before relief reached her.

To remove blood stains from light cloth, rub on a good quantity of lump starch, leave for one day, then brush off the starch and it will be found that the spots have entirely disappeared.

THE KANSAS INDUSTRIALIST

Volume 38

Kansas State Agricultural College, Manhattan, Saturday, December 16, 1911

Number 10

MONEY IN BY-PRODUCTS.

DAIRY INCIDENTALS WORTH AS MUCH AS BUTTER AND CREAM.

There's Veal or Pure-bred Calves to Sell; Skinned Milk to Make Pork of; and the Manure With a Value of \$2.50 a Ton.

How many dairymen know that their supposedly unimportant products around the dairy are worth as much as their butter and cream if properly used? The value of sidelines on a dairy farm, such as skimmed milk, calves, and the manure, are equal to the value of the butter or cream sold. This profit, of course, is obtained indirectly by using the skimmed milk for feed and the manure as a fertilizer. More work is added and consequently more time is needed, but it is as profitably spent as the time spent in producing the main dairy products.

THE WORTH OF SKIMMED MILK.

George S. Hine, of the extension department at the Kansas Agricultural College, gathered data from an experiment carried on several years ago concerning the value of skimmed milk in feeding hogs and calves. Skimmed milk on the market sells at about 15 cents for 100 pounds. The experiment showed that where a ration of one to three pounds of milk to one pound of grain (corn meal in this case) was fed, the milk was found to be worth from 24 cents to 46 cents a hundred, the value varying according to the price of grain. By this method the price of skimmed milk is more than doubled. In the experiment with calves the milk was found to be worth from 19 cents to 43 cents a hundred, depending on the selling price of calves.

Then there's the profit from calves. Veal calves are most profitable when fed skimmed milk with corn as a substitute for the butter fat in the cream and shipped to the market rough dressed. There also is a large demand for pure-bred and high-grade heifers all over the country. These calves bring fancy prices at all times. The heifers may be used at home. Pure-bred male calves may be sold for from three to ten times as much as veal calves.

GET A SEPARATOR.

A farmer who lives too far from a good market for whole milk should get a separator. He should feed the skimmed milk to the pigs and calves. Not only does a separator save labor for the women folk, but also for the men. And the returns are greater in the long run than if the whole milk was sold.

In an experiment carried on at the Kansas Agricultural College in 1907-8-9 on the fertilizing value of dairy manure, L. E. Call, associate professor of soils, showed that a ton of this manure contained fertilizing elements worth \$2.50 a ton. One ton of this manure was worth \$4.50 in the increase of crops when the manure was used on wheat land followed by alfalfa. This gave an increase of \$2 a ton in the manurial value due to humus.

Girls Visited the Woolen Mills.

Twenty girls in the textile class in domestic art of the agricultural college visited the woolen mills in Topeka, Monday. The class also studied different kinds of rugs in the department stores in Topeka. The Union Pacific provided a special car on a morning train and the Manhattan Street Railway sent a car to the college to take the class to the station. Miss Antonetta Becker, head of the domestic art department, and Miss Vera Mutchler and Miss Anna Bayha, instructors, accompanied the party.

Ticking makes substantial kitchen aprons. Large, plain white ones may always be handy to use for emergencies.

WON IN DAIRY JUDGING.

D. H. Branson Received the Gold Medal of the Agricultural Association.

Here are the scores recorded in the recent judging contest of the Agricultural Association. The association offered the prizes, a gold medal first, \$5 for second, and \$3 third. These were awarded in this order:

D. H. Branson.....	532½ points.....	gold medal.
Earl Roberts.....	530 points.....	\$5.00.
B. A. Pratt.....	527½ points.....	\$3.00.

There were forty-two contestants.

HAVE YOUR HOUSE WIRED.

If You are Building, It's a Good Idea to Prepare for Electricity.

Every farmer should put in the rough wiring for electric lights when he builds a new house. It is possible that electricity will be used on farms and in small towns in the near future. Save money and trouble by wiring your houses before the plastering is done, says J. O. Hamilton, professor of physics at the Kansas Agricultural College.

The perfection of the gasoline engine and its use as a prime motor makes the installation of a home electric light plant feasible, Professor Hamilton says. The building of interurban railroads is developing a means for distributing electrical power to country districts, electricity being sold to those within reasonable distance of the line. The erection of power lines connecting some central towns with many smaller towns is bringing many country homes along these lines in touch with the source of electrical energy.

Since the installation of the rough wiring in the house adds but little to the first cost, and since this wiring can be done so much cheaper, neater and safer while the building is being erected, every builder of a home, either in the country or village, should have the house wired, even though the source of power is not in sight.

A competent man should be hired to do the work. This man can be obtained, probably, from the nearest point where electric lights are used. The wiring should be done just before the laths are nailed to the joist and studding. The usual cost for this work is between seventy cents and one dollar an opening. An opening is required for every point where lights or switches are to be installed. To do the rough wiring for a house of eight rooms, twenty-seven openings will be needed, costing not to exceed \$27, the contractor furnishing all material.

If the wiring is not to be used at once, the ends of the wire may be plugged flush with the plaster and their location marked. In this way the appearance of the room is left as usual until the fixtures are put in.

"ROYAL PURPLE" WELL LIKED.

A High School Principal Praises the Students' Publication Issued Last Year.

Here is a letter received by President Waters. It shows how much real effort is appreciated, and it is a mighty welcome encouragement for the students to continue in their determination to make the annual "Royal Purple" a dignified volume which they will be glad to show ten or twenty years from now. This is the letter:

Greensburg, Kan., December 4, 1911.

Dear Sir.—Some time since, our school received a copy of the "Royal Purple." Our pupils have enjoyed it immensely. It is a splendid work. The lack of foolishness, as compared with many other productions of like nature, is a mark of the earnestness of your students.

We thank you, and sincerely hope that the prosperity of the greatest school that Kansas possesses will continue.

Yours respectfully,
CHAS. H. BROOKS, Principal.

Skillets, griddles, iron gem-pans and waffle-irons should be well greased and burned off once or twice before using.

IT'S WOMEN'S WEEK, TOO.

THREE-DAY PROGRAM FOR HOUSEKEEPERS AT HOLIDAY MEETINGS.

A Model Breakfast Will Be Cooked and Served One Morning—Bread Making, "From Flour to Loaf," Also to be Demonstrated.

It's going to be just as much for women as men—this state meeting of farmer folk at the Kansas Agricultural College, December 26 to 30. You can see that plainly when you look at the program of the women's meetings which now is all planned. From 9 o'clock in the morning until 4 or 5 in the afternoon, Wednesday, Thursday and Friday of the institute, will be a continuation of interesting things for women and girls in the Domestic Science building.

There'll be a demonstration every morning, either in the kitchens of the domestic science department or in the sewing rooms. Bread making will be demonstrated one morning. Then Miss Becker, of the department of domestic art, will show how to use tissue patterns in another demonstration. She will tell of the best patterns to use and explain the mysteries of "cutting out" with the least waste. It will all look simple to you when you have seen how it is done correctly.

Maybe you think you can get up a good breakfast. Doubtless you can. And you may have the idea that you can do it a little better than anybody else. Wait until you see a model breakfast for an average family cooked and served in up-to-date style by two domestic science experts. Friday morning at 10 o'clock—fashionable hour for breakfast, isn't it?—this meal will be prepared as it should be in every home, by Miss Lindsey and Miss Ford, instructors in cookery. If you are there you may get some hints that will be valuable to you when you go back home.

These are only some of the things arranged for the women and girls. In addition there will be talks on every subject in which any housewife is interested. Miss Frances Brown is going to tell of labor-saving devices in the kitchen. And she knows about a good many of them, too. She can tell you how to save steps and money. But here's the program of the whole thing and you can read it yourself. It has been decided not to hold butter-making, bread-baking and fruit-canning contests this year.

Wednesday Morning.

9:00 Food Principles and Their Preparation.....	Miss Huse
10:00 Demonstration—Bread Making.....	Miss Dow

Wednesday Afternoon.

2:00 Dietary Standards	Miss Huse
3:00 Diet in Relation to Child Life, Miss Nash	

Thursday Morning.

9:00 Buttonhole Contest,	Miss Becker
10:30 Demonstration—Use of Tissue Patterns.....	Miss Becker

Thursday Afternoon.

2:00 Interior Wall Treatment....	Miss Weeks
3:00 Textiles.....	Miss Smiley

Friday Morning.

9:00 Diet in Relation to Disease, Mrs. Simmons	
10:00 Demonstration—Serving a Breakfast.....	Miss Lindsey and Miss Ford

Friday Afternoon.

2:00 Labor-Saving Methods in House-work	Miss Brown
3:00 Maintenance of Family Health, Miss Dow	

The sixth and last butter-scoring contest for 1911 is to be held in the dairy building, Thursday of institute week. The butter will be on exhibition at least one day. Every Kansas butter maker should be represented in this contest. The highest score at present is 93½. The same requirements are to be observed as in the previous contests.

All the other meetings will go forward as announced; the corn breeders, the swine breeders, horse breeders, veterinarians, dairy producers, the gas engine institute, and one or two others, all of big importance to the farmers.

"The West," said Ralph Faxon, once upon a time, "makes men."

CLARENCE SHAMEL IS COMING.

The Orange Judd Editor Will Be Here for Farmers' Week—His First Visit.

A letter was received, yesterday, from Clarence A. Shamel, editor of *The Orange Judd Farmer*, saying he intended to visit the college farmers' week. Mr. Shamel never has been in Manhattan. For years he has talked, upon occasion, about coming here to see the agricultural college but, always, something has happened to prevent the carrying out of his plans. He will arrive here December 26.

FIGHT SAN JOSE NEXT.

This Pest Can Be Checked if Trees Are Sprayed While Dormant.

San José scale, a pest which is spreading over this country with amazing rapidity, can be checked, says Dr. T. J. Headlee, state entomologist at the Kansas Agricultural College, if orchard owners will spray now while the leaves are off the trees.

Spraying with a lime and sulphur solution any time while the trees are dormant is advised by Doctor Headlee, but he believes that the best results will follow if the application is made before the buds begin to swell.

Other solutions may be used as sprays, but the lime-sulphur mixture is especially recommended because it also will kill scab and fungous growth.

To prepare the spray, 20 pounds of lime and 15 pounds of sulphur are allowed to 50 gallons of water. Put ten gallons of water in an iron kettle and add 20 pounds of unslaked lime. Boil, adding water when necessary to keep the mass from sputtering. When the lime has slaked into a pasty mass boil until the mixture assumes a dark red color. Strain and add water to make out the 50 gallons of spray. There are other solutions on the market already prepared that are effective. Spray with great care, says Doctor Headlee, as it is only by contact with the poison that the scale is killed.

Ordinarily, one spraying in a year is sufficient, but where the pest is well established it is well to spray now and then again later on in the winter. Since one scale can produce nearly 3½ millions of young in a single summer, it is evident that if the pest is not combated promptly it will soon destroy an orchard.

POMACE MAKES A FERTILIZER.

This Waste from Apples Also May Be Used as a Hog Feed.

Apple pomace can be used as a fertilizer. It will add humus to the soil. Never put the pomace in the orchard, as it spreads fungous diseases and insects which otherwise would be destroyed.

Hogs eat pomace readily. And that, says Albert Dickens, professor of horticulture at the Kansas Agricultural College, is one of the best ways to dispose of it. Do not feed pomace to fattening hogs, as the acid in it will set their teeth on edge, and they may eat less.

Pomace is sometimes placed in barrels and covered with water, vinegar being made in this way. This is an unsatisfactory method if there is very little juice left in the pomace. Flies and other insects that are drawn by decaying matter will give trouble if cider is made in this way.

Water Power Withdrawals.

Over a million and a half acres of public land now stand withdrawn by the government as being valuable for the possible development of water power. In October the United States Geological Survey recommended the withdrawal of 54,422 acres as having power possibilities and the restoration of 2600 acres in Montana and Wyoming because field examination by the Survey showed them not to be valuable for that purpose.

CUT THE GROCERY BILL.

BUYING IN QUANTITIES IS ONE WAY, FOR INSTANCE.

Cheaper Cuts of Meat, Prepared Right, are Delicious—Economy in the Small Things is Required, Too—Some Hints on Saving.

Prices are high, but wouldn't you like to keep your grocery bill somewhat as it used to be? Economy and thoughtfulness are necessary.

One of the faults now is the buying in five- and ten-cent lots. It is far cheaper to buy foods that will keep in large quantities. Buy a sack of sugar or a box of crackers. Starch, dried fruit, raisins, and tapioca are some other things to buy in large quantities. The prices are less for a pound and you can get reduced prices on large orders.

WATCH THE MARKETS.

Another thing to see about is to watch the markets and buy fresh fruits and vegetables in season, then can them yourself. You save about 30 per cent if you don't wait and buy the canned goods at the store. For instance, if you buy a glass of pure fruit put up in sugar it will be 25 cents for about a cupful. If you buy the fruit, as plums, you pay \$1 for a crate, use 50 cents' worth of sugar, and have either 10 or 12 quarts of canned fruit.

Here are some other hints on saving: Wash the eggs, then use the shells to settle coffee and clear the soup or bouillon. Use fats, such as cottolene and cottolet, or oils for cooking, instead of butter. Some persons prefer a mixture of ½ butter, ½ fat, saying the butter removes the greasy taste of pure fat. Use the tops and butts of celery, which can not be sent to the table, to season the soup. Buy unshelled nuts and shell them yourself. Buy the cheaper cuts of meat, which by a little time and care in cooking will be as delicious as the more expensive cuts. You can also use meat substitutes, as nuts, cheese, egg dishes, as souffles and nut loaf. Beans, oatmeal, and cereals, spaghetti, macaroni and lentils are as nutritious as meat and far cheaper.

LOOK AFTER THINGS.

The careful housekeeper will eliminate all waste by overseeing the housework herself. She will take left-overs, such as cold meat, dry bread, some cold cereals, mashed potatoes, and fallen cake, and make croquettes, puddings, and potato patties. Plain boiled potatoes can be used, also. A few potatoes in creamed codfish make it palatable and more easily digested. Potato patties are made by adding salt, pepper and eggs to mix well to the cold potatoes, beating until light. Then drop by spoonfuls on skillet and saute. Mix eggs, milk, and sugar for a custard; add the fallen cake, crumbled, and bake until firm. Then put some fruit and the beaten white of an egg on top; brown slightly and serve with sugar and cream.

A STORY ABOUT THE PRESIDENT.

Lewis H. Beall's Biography of Mr. Waters Was in the Mail and Breeze.

An exceptionally interesting article telling the story of President Waters' activities in the educational world appeared, last week, in the *Mail and Breeze*, with a portrait. The article had the front position, and covered about two pages. It was written by L. H. Beall, assistant professor of English literature.

Modern Philology, published at the Chicago University, has just accepted, for publication in the July number, an article by Professor Beall on the relations between English and German literature in the middle decades of the eighteenth century. *Modern Philology* is a quarterly magazine, and leads in its own field.

THE KANSAS INDUSTRIALIST

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PRES. H. J. WATERS Editor-in-chief
PROF. C. J. DILLON Managing Editor
DR. J. D. WALTERS Local Editor

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The typesetting and other mechanical work is by students in the school of printing, which J. D. Rickman is superintendent. Both these departments are in Kedzie Hall.

Newspapers and other publications are invited to use the contents of the paper freely without credit.

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SATURDAY, DECEMBER 16, 1911.

SOME CHRISTMAS THOUGHTS.

Well, well, well, if here isn't another Christmas! Where did the year go, and what have we done? For one thing, we have almost paid up the expenses incurred a year ago in remembering our loving friends and are ready to go the limit again. Life, as someone, probably Shakespeare, remarked, is just one thing after another. The happiest time of the entire twelve months into which, fortunately, this existence is divided, comes when the worries of the day are laid aside and we dumbly submit to being driven tamely about in a maze of Christmas shopping tours personally conducted by the better part of the family. Men may growl and overwork their perennial grouchiness, but, after all, this Christmas season is the gladdest time of the whole year for them. There isn't a doubt about it.

Somehow we feel more forgiving "Jest 'Fore Christmas." There isn't a knock in the whole office. Even the auditor would get the glad hand if he should chance to drop in. It's a mellow season in a land that is blessed by Providence, in a state where, despite a dearth of rainfall in time of growth, the farmer heart swells with gratitude and the farmer purse is open in liberal contribution to the common cheer.

There's nothing wrong with Kansas. There's nothing wrong with its people. Not a click of controversial warfare is heard when Santa Claus drives by. From Kansas City to Coolidge and from the north to the south line—stopping for a moment at Wichita, to see dear old H. J.—the joy of the season bubbles up and over the brim and the whole outfit is happy because Christmas is here.

And another thing: Where is there an editor in this big state who hasn't the bliss of hanging up stockings, this year; who isn't going to have the fun of hunting for the hammer and an old box with which to plant the Christmas tree in the corner of the living room or the parlor? Where is the editor whose early morning nap won't be disturbed by patterning feet on the stairway, feet that are carrying a mighty expectant bit of humanity, eyes bulging in eager curiosity for the gifts that certainly are there, where the editor and Mrs. Editor put them, on the tree? A poverty-stricken, gloomy home, indeed, where no little feet come down the stairs to see the Christmas tree. Let's hope there isn't one such home in Kansas, this year, or any other year; and in the hope let there be encouragement for the coming years, that times may be good, that men and women will remember their obligations, and that Mr. and Mrs. Editor may live long and prosper.

And, of course, the same good wishes go out to Mr. and Mrs. Farmer, and the boys and girls. Long may they wave.

ONE THING AT A TIME.

There never was, and probably never will be, a very large profit in producing an average crop. It is the farmer that has a specialty that makes

the most money from his farm investment. Large profits always come from doing something that the other man can't do.

Decide what your specialty will be and arrange the farm buildings according to a definite plan. If you desire to feed cattle, go at it with the idea of making it permanent business. Conduct the business with the idea of making cattle feeding your main line. For example, cattle feeding requires a large amount of corn. If you were in the dairy business this corn would be cut up into silage, and would, therefore, be planted thicker. Have a specialty and plan all the farming operations so as to aid this main line.

If you are a sheep breeder there are even more complicated problems to consider. For example, in this line the fields would have to be arranged to provide for changing the lambs from one field to another to escape the sheep parasites. And if hogs are the specialty it is necessary to be on guard against cholera.

Any specialty that fails to maintain the fertility of the soil will result in failure in the end. The maintenance of fertility is the essential thing in every plan of farming. And this fertility must be maintained either by a rational system of live-stock farming or by expensive commercial fertilizers. The humus supply also must be kept up by plowing under vegetable matter.

Many farmers do not reach the greatest success because they do not adopt a specialty and stick to it. Many others who have taken up specialties do not arrange their farm work with reference to the main line.

F. B. N.

RUNNING A FARM PAPER.

(These are the views of a student who expects to be the editor and perhaps the owner, of a farm paper one of these days. They are worthy the attention of even an old-timer, and they are refreshing.—Ed.)

The organization of a farm-paper staff should be divided into the news, editorial and business sections. Establish a definite style and stick to it. Have most of the news section written by members of the staff. The average farm letters are of little value. Don't use good paper and ink in printing them.

Another thing: Study the make-up of your sheet. Go into the pressroom when the foreman is making up and camp with him until he is through. If you don't he will tumble the type in with about as much regard for system as is found in an old iron pile. Most farm papers are made up just that way. Don't let the ads. begin on the first page. The readers should have a few pages where they can read without being invited to buy the latest pure "brain" breakfast foods, or the alleged to be successful farm tools.

Have an editorial page. If the editor does not have enough brains to write a page of good, short editorials he should go back to the woods. And don't write all of the editorials on political subjects. Write on live farm topics, and you will not lack readers. The world is more interested in the conservation of the phosphorus supply and the development of good roads than it is in the platform of some politician who is dispensing inflated air in an effort to be elected to some office. Write short editorials. The days of the ponderous and heavy article that expressed the editor's opinion have passed. Let them go.

Every bit of copy should be written in clear, terse English. See that the copy reader corrects all the mistakes. If he lets as many errors get into print as are found in the average farm paper he should be discharged.

Write interesting heads. Most farm-paper heads are uninteresting and discouraging. As interesting a head can be written for a farm story as for the average business story. Use a few strong, active verbs. If that is not possible the story should not be printed. Then put in plenty of subheads. A page of solid type looks dry and heavy. Encourage the reader by breaking the heavy effect a little.

Remember you must get the farmer's viewpoint. After you get it be sure you keep it. A farm writer must

A Golden Text.

And the angel said unto them: Fear not, for, behold I bring you good tidings of great joy, which shall be to all people:

For unto you is born, this day, in the city of David, a Savior, which is Christ, the Lord.—Luke 2, 10, 11.

understand the ideas and ideals of the country. Most city men never get this. The successful writer on country life and affairs in the future will come from the farm.

F. B. N.

DISCIPLINE MIND AND BODY.

Much of the outcry against physical culture and athletics is without foundation, or largely is misdirected. The body must be disciplined as well as the mind. The development of the two must go together. Either without the other will lower efficiency.

It cannot be said that the college is the place solely for the development of the mental side of young men and young women. It is just as much the place for the development of the physical side and to teach them how to use their talents, both mental and physical, most effectively for the longest period of years.

In short, it is the business of the

special reduced rates on the railroads.

President Fairchild and Professors Shelton and Walters share in the institute at Osborne, Tuesday and Wednesday of next week.

Professor Shelton spent two days of this week in Topeka, attending the meeting of the Shorthorn Breeders' Association, of which he is secretary.

The President's office has, for three days past, been full of students arranging for the studies of next term, thus saving time on the opening day.

E. M. Brice, of the Blue Rapids Times, spent a few hours in looking over the college buildings and work on Thursday, a visit apparently pleasing to all interested.

Professors Failyer, Popenoe, Kellerman, and Mrs. Kedzie bear a part in the institute at Wakefield this week. We expect to report an interesting gathering.

A great calm seemed to possess the college yesterday about half-past twelve, when all the four hundred students had so much earlier than usual scattered for the vacation. About half the students will visit their homes for the holidays.

W. A. Munz, a student of 1879-'80, is reported as chief operator in the union depot at Winfield.

H. M. Cottrell, '84, is spending a few days here this week in searching the

The Winding Road.

There are many to sing us the doleful song Of the heart that is heavy with tears; But who will sing us the dauntless song— A marching measure that swings along— Of the heart that has no fears?

The joy of life is the forward road To the heart that is ready to go; There's a laugh and a jest at the end of day, And a sweet voice calling from far away Whenever the wild winds blow.

Though what we shall see at the turn of the road Is hidden from you and from me, Yet with heart that is free of a vain disguise, And face to the front and fearless eyes, We will dare whatever we see.

—Tertius Van Dyke, in the Outlook.

SUNFLOWERS.

The latest candidate for the bomb-proof safe: "Allegedly kidnaped."

Crane & Co. are to publish Jay House's new book. They are good printers.

The snipe season, we are informed, is now on. And is there a law, Mr. Dyche, against carrying gunny sacks and lanterns?

The United States has sued a woman 114 years old. She is said to have been in the original company with Adelina Patti.

The blow has fallen. J. B. McNamara once worked at Winfield. The claim has been filed.

Presumably to test "Concrete Bridge—CXCV," Mr. Faxon ran "Soft Water—DCCV" under it in *The Evening Telegram* a few days ago.

"On to Hiawatha" should now be the slogan of Billy Sunday's band. We believe Hon. Herbert intends to run for congress.

Now, we may be able to get a few lines of information about farming into the Wichita Beacon. The Lord is good to those that wait.

One of the allegations in a divorce suit in Wichita is that the family bed contained bedbugs. Having learned our entomology many years ago in a region where this charge would apply, we give the aggrieved husband our heartfelt sympathy.

A census map shows that if the property in Riley county were divided equally every man, woman and child would have \$1801. But it is not divided, gentlemen, and it will not be divided. Moreover, we have done our shopping for the year.

The Beacon had an editorial, last week, about Prof. W. J. McGee, of the United States Department of Agriculture, and used periods between the initials. This means a libel suit from the professor. Who has not heard of his strange name?

In the case of Miss Anna Carlson, of the Lindsborg News, we respectfully move to strike out the words "shave every morning" and insert: "Clean shirt waist, clean face, a belt that fits and stays where it is put, a smile, and shoes that are not run over or down."

Billy Sunday preached to 214,750 persons in Wichita in three weeks. Of course there were many repeaters. And out of all the number he convinced only 1409—that is, that many said they were converted. What of the other 213,341? Have they all gone back to Hutchinson?

A young woman in Dubuque, Iowa, according to the *Telegraph-Herald*, "complained to the police" that a young man had hugged her, kissed her twice "on the street" and ran away without taking her purse or asking for any money. Why did this girl complain?

We don't know a thing about the case, but we are with the Concordia Blade in its condemnation of the busy-body officers who arrested two boys for hunting rabbits, a few days ago, without having a license. No punishment should be too severe—for the officers. We have a gun and some other things for sale, but dare not say so in these columns.

Some misguided person remarked, publicly, a while ago that "Hanover wasn't much of a place, anyway." That same person might profit much, if he were intellectually capable of it, by reading the fine little paper that is printed in Hanover, the *Democrat*. We've never been there, but after reading this paper we are mighty certain to pay the place a visit the first time we get a chance.

Christmas and Captain Crawford.

Written for the Kansas Agricultural College.

Good-bye
1911

Welcome
1912

With all my heart and all my soul,
With all the good there is in me,
I fill for you love's nectar bowl
And drink this honest toast to thee,
May peace and blessings from on high
With love of God and man be given,
And happy when you say good-bye
To nineteen hundred and eleven.

And Oh! may nineteen twelve combine,
With love and faith and tenderness,
And gladsome glints of God's sunshine
To crown with glory and success
The coming days and months and years,
Of you and those you dearly love,
Transposed at last your earthly tears
To jewels in your crown above.

Your broncho friend,
In Clouds or Sunshine,
J. W. CRAWFORD,
"Capt. Jack."

college and university to teach these young people how to live a long and an efficient life.—From President Waters' speech at Columbus, Ohio.

IN AMERICAN KANSAS CITY.

In the list of births, one night recently, published in *The Star*, were the names of seventeen families. Six of the number were Americans. Here are the others; the list shows what is the matter with the north end of Kansas City: Vito and Stefania Benn; Tony and Providencia Bottoglia; Giorgi and Carmela Cermini; Antonia and Saneria Cere; Julius and Lizzie DeCarelle; Lucia and Lena Francesco; Pasquale and Josie George; Mattie and Grozoia Lombardo; Catardo and D. Patti; Theodore and Conjetta Politio; Francesco and Antonia Vigliatore.

Watch the paper, any night, from any big American city. Then watch the courts.

TWENTY-FIVE YEARS AGO.

President Fairchild Had a House to Rent
a Mile from Here.

FOR RENT.—A house of six rooms, with barn and fruit trees, one mile from college. Terms reasonable. Inquire of President Fairchild.

J. H. Vincent, of Blue Rapids, spent several hours at the college Tuesday and Wednesday.

Professor Shelton reports the meeting of the Shorthorn Breeders' Association this week the best in its history.

Regent J. H. Fullinwider shows his interest in the students by efforts for

Library of Agricultural Works.

Anna Marshall, a third year in 1882, and a graduate in '86 of the State Normal School, was visiting the college Thursday.

Flowers to the Living.

There is one publication which comes to the *Banner* exchange desk which always receives a cordial welcome. It is THE KANSAS INDUSTRIALIST, issued by the Kansas State Agricultural College. Most college papers are amateurish in their makeup, but this is totally lacking in THE INDUSTRIALIST. It is as near perfect, typographically, as any paper printed, being several degrees ahead of the "ideal newspapers" published by the type-foundries. Not only is it well printed and made up, but the matter it contains is well worth reading. It would be a mighty wise thing if the publishers of about half the Kansas small town papers would give this sheet a careful scrutiny and take note of what a newspaper should be.—*Bucklin Banner*.

For Women, Only.

Make 5 ch. st. and join in a circle. Make 6 si. cr. then 3 ch. st. Wrap once over the hook and catch through the side of the first si. cr. Make 1 do. cr. and 1 ch. st. in each of the 6 si. cr. Coil this tight and fasten with a si. cr. to the first ch. st. Make 4 ch. st. and fasten to the 3rd ch. st. of the circle. Into this loop make 1 ch. st., 1 si. cr., 4 do. cr., and 1 si. cr., then 3 ch. st. and turn, 1 do. cr. and 1 ch. st. into the first 3 stitches.—From a Women's Page.

ALUMNI NOTES.

Kirby Wyatt, '11, was visiting college friends last week.

Harvey Roots, '11, was in Manhattan Saturday and visited the college. He is farming near Centralia, Kan.

A girl was born to C. E. Davis, '06, and Mrs. Davis, in Lewistown, Mont., November 1. Mr. Davis is engaged in electrical work in Lewistown.

Miss Helen Halm, '08, has charge of the work in domestic art and Miss Grace Berry, '10, the work in domestic science in the State Normal at San Marcos, Texas.

Dr. T. J. Headlee addressed the Western Association of Nurserymen at Kansas City, Wednesday. His subject was "The Relation of the Agricultural College to the Nurserymen."

Ward Hollis, '11, left last Monday for the Oregon Agricultural College. He will take charge of the new veterinary department established there this year. His salary will be \$1200 a year.

E. L. Hageman, '11, is visiting in Manhattan for a few days. He did some government inspection work on land surveys in Washington state last summer. This fall he worked in the office of the county surveyor at Clay Center.

Charles Myska, '11, was in Manhattan Wednesday. He has been working on a soil and subsoil survey in Reno county. Two United States and two state employees did the work in co-operation. Twelve hundred square miles were surveyed by sections and a map prepared showing the formation and texture of the soil.

Mrs. Mary (Pierce) Van Zile, professor of domestic science, will make two addresses before the American Home Economics Association in Washington, D. C., December 28 and 30. "Methods of Teaching Elementary Cookery" and "Extension Education in Home Economics in Kansas" are the subjects on which she is to talk.

"POUND OF CHUCK, PLEASE."

And a Good Cook Can Make That Cheap Cut Delicious.

Stop spending all your money for the best cuts of meat. Pay more attention to the way the meat is cooked than the price and you will have good meat and more money.

The butcher won't laugh when you ask for the cheapest cut of beef. Don't be afraid of that. He doesn't dare to. Take home the cheap cut, wipe with a moist cloth and cut in pieces about one inch square. Take one-half of the meat, dredge with flour, and sear in a frying pan. Then put this meat with the uncooked meat, plus the bones and the gravy from the frying pan, in the pot of hot water. Add a very little red pepper. Boil rapidly for a few minutes, then let it cook slowly until done. Thirty or forty minutes before serving add the potatoes and carrots cut in small cubes. Then, just a few minutes before serving, add the dumplings. This is commonly known as an "Irish stew," and is very good.

The chuck is one of the cheapest cuts of meat, but when cooked slowly, either with or without vegetables for seasoning, makes an excellent dish.

A high temperature toughens the fibers, and too much cooking causes the fibers to separate and fall in shreds. A cheap cut cannot be used successfully for frying, but for boiling it is nearly as good as the higher-priced cuts. In fact, they are even more highly flavored, and are as nutritious. The flavor is retained better if cooked in a fireless cooker or a paper bag.

LOSE SIX YEARS AN HOUR.

The Fountain of Youth Discovered by W. A. McKeever, Philosopher.

If you travel westward around the world you have to turn your watch back an hour every one thousand miles to correspond with the time there.

Now when you have completed the circuit of the globe you have turned your watch back twenty-four hours. You also will find that while, to you, the day apparently is Wednesday, the day at home is Thursday. So you are one day younger than you would

have been if you had stayed at home. If you go farther north or south from the equator the same result will be found, and since the distance around the earth is less as you approach the poles, the trip can be made in much less time. Suppose, then, that you are at the north pole and you walk about it toward the west, each circuit occupying just one minute. You will thus lose a day from your life in one minute. On increasing your speed you are able to remove at least sixty days in one minute, which would be approximately a year in ten minutes.

You now see the great possibilities before you. In ten minutes you may become one year younger; in one hour, six years younger; in one day—and so on. You see how very plain it is. All of which is from the thoughts of W. A. McKeever, professor of philosophy at the Kansas Agricultural College. Professor McKeever argued the subject successfully with one of his classes last week. Good material for reasoning, he says, and he regrets it's nothing more.

GRIDIRON HEROES FOR 1911.

These Are the Football Boys You've Seen in the Mud.

The winners of football K's have been announced. They are: Captain Holmes, Wehrle, Burkholder, Loomis, Stahl, Young, Prather, Hartwig, Sims, Hehn, Hopper, Sidorfsky, Schuster, Howenstein, Maughlin, Felps, Schafer. R's for "Reserves" will be awarded to Hunt, Vale, Moss, Pollock, Unruh, Collins, Van Nordstrand, Norlin, Byerly, and Cusic.

WHEN A HALFBACK CARVED.

A Young Cook Was Left Without Hash or Croquettes.

The value of teaching practice along with theory was demonstrated very excellently last winter at the Kansas Agricultural College.

Girls in the domestic science school were serving dinners to one hundred senior men, who were seeking to enlarge their knowledge of table etiquette. The girls had been told that the amount of meat served for dinner should furnish hash or croquettes for the next meal.

That was the theory. But here's where practice came in and spoiled things. Instead of cutting off four polite slices—as a theoretical husband would have done—the practical host, who was a half back on the football team, carved the steak in quarters. The rest, also being practical, ate all that was quartered to them.

The moral of this story is that in practice the wife should hold a whispered consultation with her husband—if he is to do the carving—before seating the guests.

Much Oil Used by Railroads.

The total length of railroad line using fuel oil in 1910 was 21,075 miles, a trackage equivalent to that of practically five transcontinental lines stretching across the United States from ocean to ocean. Some of the lines that use oil, however, also use coal. The number of barrels of fuel oil—of 42 gallons each—consumed by the railroads of the country in 1910 is stated to have been 24,526,883. This includes 768,762 barrels used by the railroads as fuel otherwise than in locomotives. The total number of miles run by oil-burning engines in 1910 was 88,318,947, according to the United States Geological Survey. This would have carried one engine or train around the world approximately 3530 times.

Some Interesting Pamphlets Coming.

"The Water Supply of the Modern Farm House" is the title of a pamphlet which Dr. J. D. Walters, head of the department of architecture and drawing, is writing. This bulletin will be published by the college extension department. One on the "Heating of the Farm Home" also is being prepared. Doctor Walters is interested in common school and high school courses in drawing and would be willing to answer inquiries from teachers concerning these courses.

HERE'S FAILYER OF '77.

WHEN THE COLLEGE WAS YOUNG HE TAUGHT "PHONOGRAPHY."

One of the Always Welcome "I Remember When—" Class Tells of a Student Enrollment of 159—One Building Then.

Imagine the east side of the college campus as part of a corn field, and the space where the veterinary and engineering buildings stand, cultivated fields. That was the condition of things when G. H. Failyer, '77, started to school here. A farm house stood on the site of the chemistry building and the old armory was the only college building on the campus.

Mr. Failyer is visiting in Manhattan. He was for 19 years professor of chemistry in the agricultural college and nine years with the United States Department of Agriculture. To a reporter for THE KANSAS INDUSTRIALIST Mr. Failyer told, a few days ago, of the college as it was when he was here as a student and later as a member of the faculty.

159 STUDENTS THEN.

The enrollment at the beginning of the fall term when Mr. Failyer entered college was 159, and the president congratulated the students on the good attendance. The college had been located until that fall on the site of the old Bluemont College about a mile northwest of the present location. Some of the largest pine trees on the campus now were moved from the old site and replanted in the winter of 1873. While a student Mr. Failyer helped set out the rows of trees north from the shops past the east end of the veterinary building.

The photograph printed in a recent issue of THE KANSAS INDUSTRIALIST was taken from the top of the house at Eleventh and Moro, where Dean Webster now lives. It was taken in the fall, when there were few leaves on the trees.

The students in those days had no class banquets, no intercollegiate athletic contests, no lecture course, and no class "scraps." They did have concerts and amateur "dramatics," however, and in the '80's the faculty instituted regular socials, to which the faculty and all the students were invited.

The class of '77 was composed of nine persons. Only one is dead. This class, which was the largest that had been graduated up to that time, had one young woman member. The only member of the present teaching force who was in any way connected with the college at that time, Dr. J. D. Walters, began teaching architecture and drawing in 1877. In 1875, while a student, Mr. Failyer was given a place on the faculty as "professor of phonography."

TELEGRAPHY WAS TAUGHT.

Sewing was taught as early as '73 and cooking a few years later, but neither was given as a separate course. A blacksmithing and carpentry shop were in operation then, and in '74 President Anderson started teaching the industrial work in printing. The same year a course in telegraphy was started, but the interest in this study gradually waned and it was dropped from the curriculum. Manual labor on the farm was required—2½ hours on each of two days in the week.

PROTECT THE HONEY MAKERS.

Bees Should Not Have Either Wind or Sunshine in Winter.

Put your bees in a sheltered place until next spring. They should be sheltered from both the wind and the sun. Probably the best place to keep them through the winter is in an empty building. There is no danger of bees freezing in Kansas in the coldest winter if they are protected from the wind. When not protected during a blizzard they are often frozen by the chilling wind. If the sun strikes them a cold spell coming immediately after warm weather finds the bees unprepared for it. Changes in temperature also cause the bees to eat more honey than when an even temperature is maintained. Thus, if the food supply is short, there

is danger of them starving before spring flowers bloom.

When an empty building is not available straw is often packed around the hive and held in place by a box a little larger than the hive. This is not so satisfactory as the first method suggested, for bees are often forgotten after a snow storm and are smothered before the snow melts from the entrance. If they are given plenty of food and good protection in the fall and then left alone there will be a vigorous swarm ready to make honey in the spring.

TO PREVENT SOIL WASHING.

Brush in the Gullies, Tops Upstream, Will Save Your Fields.

Soil erosion can be controlled if you understand the principles of soil formation and will take a little time to attend to the rapidly forming ditches.

Place brush in the gully with the tops upstream and it will catch and hold the material washed down. Be certain that you place enough brush in the ditch so that the spring rains will not wash it away. It would be well, also, to throw some hay on the brush, to aid in catching the finer material. And, if you prefer, the woven-wire dam also may be used.

The truth which another man has won from nature or from life is not our truth until we have lived it. Only that becomes real or helpful to any man which has cost the sweat of his brow. . . . He who would be wise must daily earn his wisdom.—David Starr Jordan.

Place a stake on each side of the gully in the ground three feet from the bank and fasten a piece of woven wire to them. Be sure that they are firmly in the ground. Put straw, old hay or fine brush above this dam and it will catch most of the material washed down by the water. As the gully fills up add another strand of woven wire and repeat the process.

Humus, the decaying vegetable matter of the soil, tends to prevent soil erosion. Humus absorbs and retains moisture. When the ground contains an abundance of moisture the rains are absorbed and carried into the subsoil. Therefore the rain is not left on the surface to wash ditches. Keep the soil full of humus if you desire to stop the soil washing. Have the grasses and legumes occupy a prominent place in the rotation for those hillside fields.

Soil erosion can never be prevented entirely, but it can be greatly reduced if you manage the fields as you should.

THE U. S. LED IN COAL.

Great Britain Was Second, but was 200 Million Tons Behind.

The total coal production of the world in 1910 was approximately 1300 million short tons, of which the United States contributed about 39 per cent. This country has far outstripped all others, and in 1910, according to the United States Geological Survey, it exceeded Great Britain, which ranks second, by more than 200 million tons. Great Britain's production in 1910 was less than 60 per cent of that of the United States, and Germany's was less than half. The increase in both of these countries in 1910 over 1909 was comparatively small, whereas the increase in the United States was nearly equal to the entire production of France and was more than the total production of any foreign country except Great Britain, Germany, Austria-Hungary, and France.

The United States has held first place among the coal producing countries of the world since 1899, when it surpassed Great Britain. In the eleven years since 1899 the annual output of the United States has nearly doubled, from 253,741,192 short tons to 501,596,378 tons, whereas that of Great Britain has increased only 20 per cent, from 246,506,155 short tons to 296,007,699 tons.

A HOUSE FOR MILK ONLY.

"THAT'S THE BEST WAY TO CARE FOR IT."—REED.

A Small Building Away from the Dairy Barn and Equipped with a Separate Refrigerating Tank, Wash and Drain is the Kind.

When you build a milk house, don't make the mistake of getting it too close to the barn. It may cause you a great deal of trouble, especially if the dairy commissioner finds it out, and he probably will.

"Milk must be produced under sanitary conditions, and to do this the milk house should be either separate from the dairy barn or arranged in such a way that odors from the barn do not get to the milk house," says O. E. Reed, professor of dairy husbandry at the Kansas Agricultural College.

"A 10 x 12 foot milk house is a good size for the average farm. It should be built with a cement floor and have a drain at the center to carry away the waste. The equipment should consist of a refrigerating tank (30 x 36 inches, inside measure. This will accommodate four milk cans.), a cooler and aerator, wash, and separator.

"A windmill on the side nearest the refrigerating tank will pump cold water from the well into one corner of the tank. The water circulates around the cans and flows out at one side through an overflow pipe. This overflow pipe leads into a watering trough and the water is used for watering the stock instead of being wasted."

No farm where any quantity of milk is handled should be without a small milk house. A milk house the size described can be built for a small amount of money, and will save much of the labor required on the farm in taking care of milk.

McKEEVER TO BAKE BREAD?

At Least the Science Club, December 18, Will Hear Something.

Prof. W. A. McKeever will tell how to make philosophy bake bread in his talk to the Science Club Monday evening, December 18. Professor McKeever is one of the few philosophers in this country who is applying his work to practicable things.

D. E. Lewis, of the department of horticulture, will address the same meeting on the control of the apple disease known as apple blotch. It is only within the last few years that this disease was noticed in Kansas. It is a southern disease and appears to have moved slowly northward. At present it is giving trouble only in the southeastern part of the state. The Missouri Pippin is the most liable to attack by this disease, and this crop is often completely destroyed by it. This blotch costs Kansas thousands of dollars every year.

The meeting will be in room 27 of the Physical Science building. It will begin promptly at 7:30 o'clock.

SCIONTI CONCERT EXCELLENT.

But Only a Few Took Advantage of the Rare Entertainment.

One seldom has an opportunity to hear a pianist so accomplished as Silvio Scionti, and certainly not for the unusually small expenditure required, as in this instance. Not more than a hundred persons heard the classical entertainment he provided, Wednesday night, December 6. Several of the numbers were distinctly "show pieces," but they were no less welcome for that reason. The program follows:

Andante favori.....	Beethoven
Lecocco and fugue D minor.....	Bach-Busoni
Rhapsody—E flat.....	Brahms
Capriccio—B minor.....	
Ricordanza.....	Liszt
Concert Etude.....	Mac Dowell
Ballade—G minor.....	Chopin
Nocturne—F sharp.....	
Polonaise—A flat.....	
(Encore)—Prelude—A minor.....	De bussy

Kansas First in Spelter.

The greatest quantity of spelter produced in any one of the United States in 1910 was in Kansas, with 105,697 short tons. Illinois came next, with 73,038 short tons, and Oklahoma was third, with 34,760 short tons.

WATER BY A WINDMILL.

SMALL AREAS MAY BE IRRIGATED IN THIS WAY.

It is Estimated That \$1.50 to \$6 an Acre Would Pay for Irrigating on a Small Scale—A Centrifugal Pump is Best.

Every farmer could afford to pay from \$1.50 to \$6 an acre for the increase in yield that irrigation would give. That is the estimate placed on the cost of irrigating small areas, by H. B. Walker, drainage and irrigation engineer with the Kansas Agricultural College.

A centrifugal pump is the best adapted where a great amount of water is required. A three-inch pump will require a four to eighthorse power engine to pull it. Oil is the cheapest fuel. The coal a steam engine would burn would exceed more than three times the cost of oil fuel. An ordinary engine burns a pint to two pints of oil for each horse power every hour.

USE A WINDMILL.

If the patch to be irrigated is less than two acres, a windmill can be used to good advantage. It should have a 40-to 60-foot tower and the wind wheel should be 12 or 14 feet in diameter. The wind cannot always be had at the time the water is to be pumped, so a reservoir must be used. It is a good plan to have a reservoir in any system where the well supply is limited. The soil soaks up too much water as it runs down the ditches in small streams, so the water is pumped into large ponds, and at the proper time the field or patch is covered at once. In this way, the water gets to the plants quickly instead of wasting by seepage and evaporation.

WELLS RANK FIRST.

Sources of water for irrigation are rivers and natural water courses, wells, and stored storm water. Their importance is in the order named. In many places in Kansas, however, wells rank first. Before you buy your machinery for irrigation, be sure of your well. It must be never failing, even in the severest droughts. The depth of the well should not be more than 80 feet. If it is deeper than that too much power would be required to lift the water.

Mr. Walker will answer questions and give estimates on irrigating when requested.

HERE'S A MENU FOR COWS.

Clover, Alfalfa, or Cowpeas and Corn Make Good Ration.

During the summer, when the largest amount of milk is obtained from cows, green grass is the ration for the herd. The feeder who wishes to keep up this production throughout the year will try to substitute for the grass other foods as nearly palatable and digestible as it is.

"To reap the highest economic returns from a properly selected and properly bred dairy herd, the animals must be fed intelligently," says O. E. Reed, professor of dairy husbandry at the Kansas Agricultural College.

"When the pastures dry up in the fall, green corn, oats, peas, sorghum or green alfalfa may be fed. Or if these green crops are unavailable, hay of some kind should be fed. As winter approaches, a balanced ration consisting of roughage and grain is good. Clover, alfalfa or cowpeas as roughage, and corn as grain, will give good results. Mixtures of grains, such as corn chop, 4 parts; wheat bran, 2 parts; cottonseed oil meal, 1 part. Or this may be used: corn chop, 1 part; wheat bran, 2 parts. Another: corn chop, 5 parts; oats, 3 parts. And various other grains mixed in the proper proportions will prove satisfactory for winter rations. In addition, plenty of good alfalfa and silage or cowpea hay and silage should be fed. In feeding these rations one pound of grain should be fed for every three pounds of milk produced.

"The main object in formulating a ration, after selecting the feeds to be used," Professor Reed says, "is to provide a sufficient bulk at all times to satisfy the appetite and feeding capac-

ity of the animal, and to furnish the amount of nutrients needed for the work the cow is doing. If the ration lacks bulk, the cow will be discontented. The roughage should form the foundation of the dairy ration. The cow should have all the roughage she can eat at all times.

"The grain ration should be regulated by the amount of milk produced. Under these conditions, the rule of feeding every cow one pound of grain for every three pounds of milk produced, daily, works fairly well. A cow producing very rich milk should have a little more than this amount."

SHEEP NEED A WARM FOLD.

A Comfortable Shed and Forage Crops for Them in Winter.

Sheep, as a general rule, emerge from the winter in a poorer condition than they enter it. If proper methods of feeding and care are used the reverse of this should be the case.

Sheep will thrive much better on forage crops than on dry feed; hence the advisability of sowing some forage crop which will grow late in the fall. Several crops have proved very satisfactory, but none probably more so than cowpeas. This plant grows lux-

No man or woman of the humblest sort can really be strong, gentle, pure, and good without the world being the better for it, without somebody being helped and comforted by the very existence of that goodness.—*Phillips Brooks*.

uriantly and has a large percentage of protein. Being a legume, it also enriches the soil by the addition of nitrogen, one of the main elements of plant food. Cowpeas should be planted in May, June, and the earlier part of July. The amount of seed to plant to the acre is from 20 to 40 pounds.

The change from green food to dry food should be made gradually. Straw, fodder, silage and alfalfa are some of the dry feeds which may be used. Cleanliness in both watering and feeding troughs is essential. A good way to keep the troughs clean is to turn them over after the sheep have eaten grain.

Sheep need a warm fold. Don't forget that. The fold should be made of tight board fencing which breaks the wind and also makes the sheep more secure from dogs and wolves. It should be large enough to provide room for all. There should be no cold drafts through sheep's-quarters.

WHAT A SILO WILL DO.

For One Thing It Will Add 40 Per Cent to Value of Corn Crop.

A silo saves all the corn you grow in the hill, from the roots to the tassel. It saves the part of the crop that evaporates, dries up and blows away when you shock the corn. It adds 40 per cent to the value of the crop over the old way of harvesting. When corn is stored in a silo you can feed it at any time.

A silo should be filled at a time when the corn is at its best and if left in the field longer would lessen its value. You have your corn crop where it can be fed this year, or next, or in three years from now, with no loss by age.

The total cost of filling a silo is only one-half the cost of shucking the corn crop. None of the silage is wasted or refused by the stock—they relish it every day in the year.

A man with a silo is independent of wet and dry weather, poor pasture, and late springs. And he will have an abundance of good, succulent feed for the entire year.

An Extensive Boy, This.

We wish to thank the people in and around Cedar Point in behalf of Carl Vernon for the kindness shown by them during the contest. Carl is sure the proudest boy in Chase and Marion counties.—*Florence Bulletin*.

BEEF AT A LOWER COST.

A LESS EXPENSIVE FATTENING SYSTEM SUGGESTED BY PROF. FLINT.

Buy Cattle in Thin Flesh, Feed Plenty of Roughage, and Then Turn Them Out on Grass Pasture—Ready to Market in July.

Choice beef can be produced with less high-priced feed, and at a lower cost, than it is produced by most feeders, thinks P. N. Flint, assistant professor of animal husbandry at the Kansas Agricultural College. Professor Flint believes in a less expensive method of fattening, in which grass is the principal diet.

The common feeding practice of many of the farmers of the corn belt is an expensive process. The cattle are fed during the winter months. Sheds have to be provided for shelter. The cost of hauling and feeding the roughage for the cattle when in a dry lot is not a small item. Bad weather is another objectionable feature—more feed is required by a steer to make the same gain.

FEEDING FOR PROFIT.

The feeding practice for more profit is this: Common feeders—cattle in thin flesh—may be bought at a low price. Get steers two or three years old. Feed them plenty of roughage to keep them in good condition until they are turned out on grass. A few hours a day, on pasture is long enough at first, until their systems get accustomed to the change. Feed the steers running on grass a ration of 8 to 14 pounds of corn. Begin with a light ration and work up gradually to the maximum. They should be ready to market the latter part of July.

Prime corn-fed cattle are scarce during the summer, as most of the feeders in the lots are finished and shipped out before this time. The packers must have cattle with some finish, and they pay a good price to get them. Coming on the market at this time, the steers fed on grass will bring almost as good a price as stock fed a full grain ration in a dry lot.

SUMMER FEEDING EASIER.

The success of this plan of feeding is due to the low price at which the cattle can be bought and the thin condition of the animals coming in the common class of feeders. Making economical gains is not a breed but a type characteristic. Often the best and poorest gains made are by individuals of the same breed.

Less labor is required with summer feeding. The cattle gather their roughage, and the manure produced by them is distributed, and evenly. In winter, dry-lot-feeding steers are fed a ration of 18 to 22 pounds of grain and 6 to 8 pounds of hay apiece, when on full feed. Cattle fed in a dry lot have finicky appetites, and are more likely to get off their feed than when on pasture.

WHEAT 5260 YEARS AGO.

This Grain, Almost Certainly, is Older than Car No. 500.

Wheat was cultivated in Egypt at least 5260 years ago. At least some grains of the bread plant were found in a brick taken from the pyramid of Dasher, built in 3359 B.C. Many of the writings on the oldest monuments in that country also tell of the growing of wheat. The Egyptians called it "br." It was smaller grained than modern wheat. There are many accounts of wheat seeds taken from mummies found in the old tombs. These seeds have been planted, but they never have germinated.

The Chinese also cultivated wheat many years ago. In 2700 B.C. they instituted an annual ceremony in which the emperor and the princes took part in the sowing of five kinds of seed. Wheat was one of the grains that was sown. They called it "mai." It, also, was very small.

Lake-dwellers in ancient Switzerland grew wheat in limited quantities. The name of their wheat was "Triticum vulgare compactum muticum," which was about as large as the ancients could manage.

It is an unsettled question as to where wheat first originated. Proba-

Coming to the College This Month?

Don't Forget the Annual

State Farmers' Institute

December 26 to December 30.

Look at this program for the week:

Stock courses and stock judging.

Poultry courses and poultry judging.

Gas engine classes.

Corn courses and corn judging.

Dairy courses and dairy testing.

Cooking and sewing classes and practice.

Ten Big State Conventions

HERE THEY ARE:

Kansas Boys' Corn Contest Association.

Kansas Corn Breeders' Association.

Road Officers' Conference.

Poland-China Breeders' Association.

Duroc-Jersey Breeders' Association.

Berkshire Breeders' Association.

Kansas Draft Horse Breeders' Association.

Kansas State Dairy Association.

Kansas Butter Makers' Association.

Be here the first morning and stay until the last train. You'll enjoy the experience and, incidentally, get what every man needs in this world: The other viewpoint.

And Don't Forget This:

The winter-term Short Courses are to begin January 3, 1912, and run for ten weeks—the chance of a lifetime. A condensed college course in your idle time.

For further information about the State Farmers' Institute address:

Director College Extension, Box G, Manhattan, Kansas.

For information about the short courses write to

H. J. WATERS, President,

Kansas State Agricultural College, Manhattan, Kansas.

It was in the Euphrates valley or in some of the nearby regions. From there it has spread over the world, and it is the greatest bread plant today.

vated there to-day. Oats is extensively cultivated in North America.

The northern boundary of cultivation for oats is in Norway. In Asia they are grown at an elevation of 9000 feet, which is higher than at any other place.

The farmers of the United States produced 1,126,765,000 bushels of oats last year, worth \$384,716,000. Of this amount Kansas produced 46,620,000 bushels.

For Printers, Only.

"Father," asked 8-year-old Alice, returning home from school, "are you good at punctuation?"

"Yes," replied the father.

"Well, tell me, please, how would you punctuate, 'The wind blew a \$5 bill around the corner?'"

"Why, daughter, I would simply put a period at the end of the sentence."

"I wouldn't," said Alice, mischievously. "I would make a dash after the \$5 bill."—*National Monthly*.

Oil Worth Many Millions.

More than 200 million barrels of oil, with a value of nearly 128 million dollars, were produced in the United States last year, according to David T. Day, of the United States Geological Survey, in an advance chapter on petroleum from "Mineral Resources of the United States" for 1910.

In lime water localities keep an oyster or mussel shell in the teakettle to prevent lime from forming in the kettle.

THE KANSAS INDUSTRIALIST

Volume 38

Kansas State Agricultural College, Manhattan, Saturday, January 6, 1912

Number 11

THESE COWS WERE BUSY

EXCELLENT RECORDS JUST COMPLETED AT THE COLLEGE BARN.

Carlotta Gave 15,773 Pounds of Milk in One Year—At Seven Cents a Quart the Net Profit Would Have Been \$418.

If a cow gives six thousand pounds of milk a year most men are satisfied. That is a fairly good average yield. But here are some two-year-old Ayrshires that surpass that figure by a long way. Their work was described last week by Prof. O. E. Reed, head of the dairy department, in the annual institute. Here are the records:

Canary Belle, 10,118 pounds of milk and 437 pounds of butter, 3.7 per cent test.

Fearnott of Oakdale, 5218 pounds of milk and 292 pounds of butter, 4.08 per cent test.

Johanna of Juneau, 7681 pounds of milk and 335 pounds of butter, 3.72 per cent test.

Rose of Oakdale, 5956 pounds of milk and 308 pounds of butter, 4.42 per cent test.

SUPPORT FOR FIVE.

Any one of these cows would support a family of five persons. Such cows probably could be bought for \$175 or \$200, but not at the college. The cost of feeding the ration, and the income, may be gauged for all the group by referring to the history of Johanna of Juneau, a model family cow; Johanna ate, every day, thirty pounds of silage, ten pounds of alfalfa hay, and nine pounds of grain, consisting of four parts of corn, two parts of bran, and one part of cottonseed meal. This ration cost \$5 a month. It was fed as described only when the cow was giving the highest yield. One pound of the grain ration was allowed for every three pounds of milk, so that when Johanna gave twenty-seven pounds of milk a day she received nine pounds of the grain.

JOHANNA'S GOOD RECORD.

Johanna gave 893 gallons of milk which sold in Manhattan for 32 cents a gallon, 8 cents a quart, or \$285.76. Not a bad kind of a cow to have around. And, by the way, a gallon of milk weighs eight pounds. Professor Reed told, too, of another fine cow, a Holstein, thirteen years old—Carlotta Abbekerke 52826. Carlotta's year record test was finished ten days ago. She gave 15,773 pounds of milk and 515 pounds of butter fat, equivalent to 606 pounds of commercial butter. Her feed cost \$95.50. Most cows pass their usefulness period at 6 or 9 years. This old cow of 13 years returns a profit, leaving out details, of \$75.75 net. If her milk had been sold at 7 cents a quart it would have brought \$513.50. Deducting the feed bill the owner would still have \$418. Her milk was skimmed, though, for the calves, and the cream used for butter.

A POULTRY DIVISION NOW.

W. A. Lippincott, "Best Poultryman in America," is the Head.

William A. Lippincott, formerly head of the poultry department at the Iowa Agricultural College, has been appointed professor of poultry husbandry in the Kansas Agricultural College. Professor Lippincott took his position January 1. With his appointment the department of poultry husbandry was made a separate department. Heretofore it has been associated with the department of dairying.

When DeWitt C. Wing, editor of *The Breeder's Gazette*, was in Manhattan a few weeks ago he was told of the probability of Professor Lippincott's coming here. "William Lippincott," Mr. Wing said, "is the best poultryman in America. I do not

often indulge in superlatives. In this case I believe it justified."

N. L. Harris, a practical Kansas poultryman, has been made superintendent of the poultry farm.

BUILD YOUR OWN FENCE.

A Good One Can Be Made for Sixty Cents a Rod.

A good general-purpose pasture fence can be built for sixty cents a rod. Galvanized wire is the best. A barb wire along the ground will prevent the hogs from lifting the fence. Two inches above this, twenty-six inch, seven-strand, woven wire, with No. 9 bar wires, and No. 11 intermediate wires, is used. This can be bought for about thirty cents a rod. Five

inches above the woven wire a barb wire should be stretched, and the top barb wire fourteen inches above this.

If the posts can not be furnished on the farm they may be bought for about eighteen cents. Concrete posts can be made on the farm for about sixteen cents, and are very good for a pasture fence.

A United States farmers' bulletin, No. 403, gives detailed instructions about making concrete fence posts. This may be had from the U. S. Department of Agriculture.

C. F. Chase, assistant in farm mechanics in the Kansas State Agricultural College, says: "With ordinary care this fence should last twenty years; with concrete posts and an occasional repair, it will last a lifetime."

When cleaning stained knives, take a piece of new potato, dip it in brick dust and scour the knives with it.

EASY JOB FOR SIX MEN.

BRAINS AND MODERN EQUIPMENT REAPED 160 ACRES FIVE TIMES.

Quick Work in an Alfalfa Field, not to Mention 70 Acres of Corn—How to Lay Out Your Task.

With modern equipment—including brains—six men harvested 160 acres of alfalfa five times, last summer, and didn't overwork themselves either. They had to hustle, it is true, but they gave a fine example of efficiency and that, as all employers know, is the scarce quality these days.

Alfalfa is a big crop in southern Kansas, especially on bottom lands.

want it done and with no complaint. After the hay is cut use a side delivery rake, which winds the hay into long windrows and, unlike a sulky, leaves it compact, keeping the foliage on the stems. To get it off the field, the best way is to load it on the wagons with a loader which fastens on behind the rack. To unload, a crane or derrick is used with the best success. A harpoon fork takes off the first several loads, until the hoist team can pull all the rest at one load. Then the fork is taken off the pulleys, and a sling, which was placed on the rack before the load was started, cleans up the rack without using forks.

This was the equipment used by the six men mentioned a moment ago in harvesting the 160 acres of alfalfa.

BAD MEALS, BAD HUMOR.

BREAKFAST, ESPECIALLY, SHOULD BE MADE CHEERFUL ALWAYS.

A Small Flower or a Bit of Green at Every Place is One Method—Changing the Breakfast Menu Occasionally is Another.

An attractive breakfast table goes a long way toward starting the day right for the entire family. One-half the bad humors in the world are caused directly or indirectly by poor meals. The importance of cheerful breakfasts is emphasized by those who teach good housekeeping at the Kansas State Agricultural College. The girls learn that most persons not engaged in active physical labor have little appetite for the morning meal, especially if it consists of poorly prepared food carelessly served on an untidy table.

Dainty table service, then, is most important at breakfast. The cloth should be spotless, and the china as pretty in its way as that used for luncheon or dinner. A growing fern in a small brass fernery makes a charming centerpiece.

A MORNING FLOWER.

One woman who is famed among her friends as a successful hostess always sees that a flower is laid by every guest's place at the breakfast table. In summer this is a flaming nasturtium or a tiny sprig of heliotrope, while in winter she uses a bit of scarlet geranium, or even a graceful green leaf from her potted plants.

Breakfast menus should be simple, but everything must be well prepared and served. There should be fruit, always preferably fresh if one can get it, but stewed fruits will do very well. Many consider a cereal breakfast food essential, but it is best dispensed with unless you can serve it with rich cream.

Cold bread is never appetizing at breakfast. Hot biscuit, muffins, or gems are not much trouble to make, and with fruit and coffee are a tempting meal in themselves—all that many persons care for. Crisp, brown toast, made at the table on an electric toaster, will also tempt delicate appetites. These toasters are made in attractive nickelplated ware and are an ornament for the table.

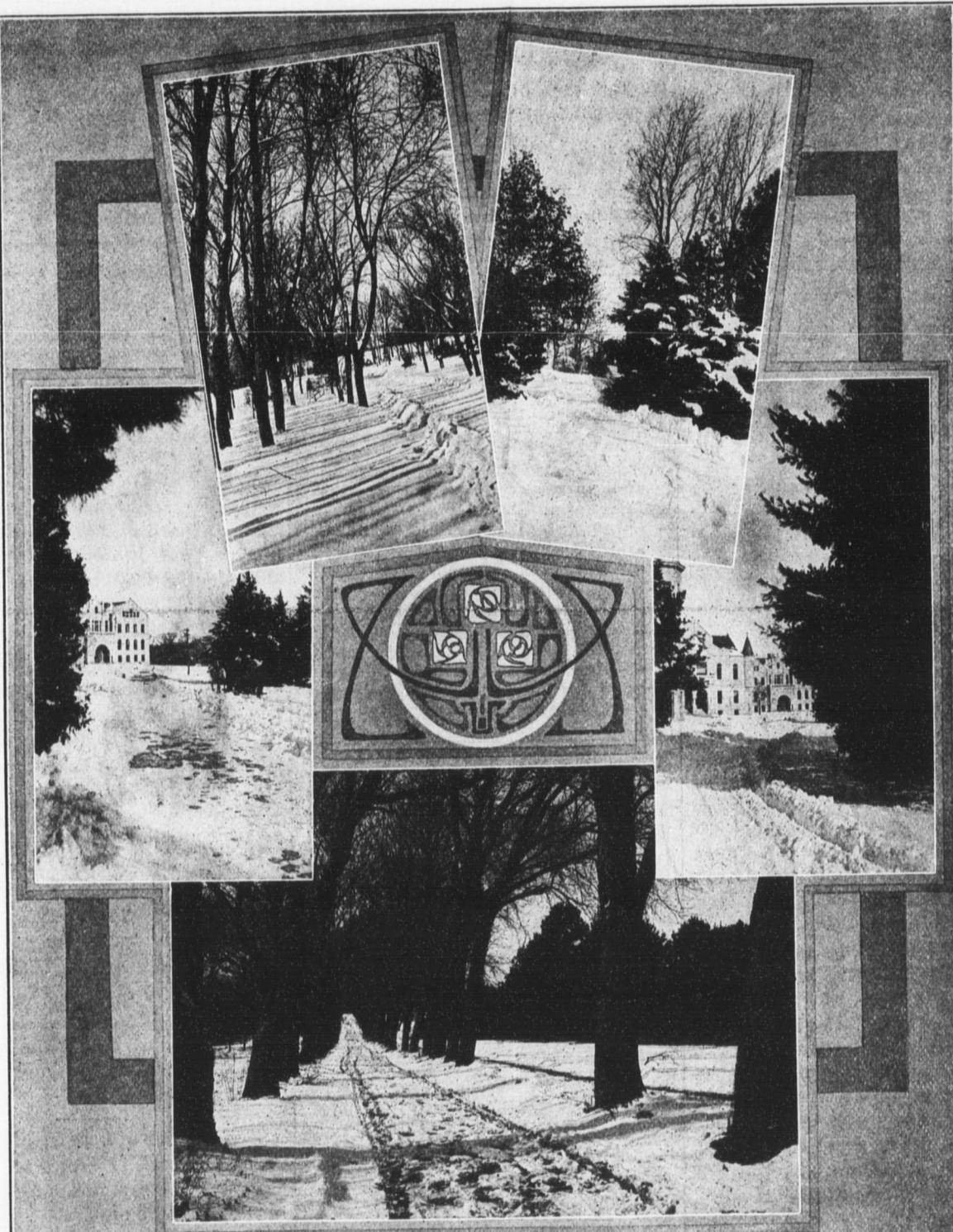
AN OCCASIONAL CHANGE.

If you wish to make your breakfasts attractive you must avoid that deadly sameness so noticeable in breakfast dishes. This is better done by changing the methods of preparing foods than by serving different foods, for the number of meats and vegetables appropriate for breakfast is comparatively few. For instance, soft-cooked eggs every morning would soon pall on any appetite. The woman who knows how can serve poached eggs on toast one day, creamed eggs in crustades the next day, and omelet or eggs a la goldenrod the next. And though she serves the same food every day, her breakfasts have the charm of variety.

He's Assistant To Dean Webster.

Duncan Steuart, assistant in the dairy division, Department of Agriculture, Washington, has been appointed assistant to E. H. Webster, dean of agriculture in the Kansas Agricultural College. Mr. Steuart is to have the title "Assistant to the dean." His position was created by the board of regents recently. His appointment became effective January 1.

To clean a japanned tray, by far the best plan is to rub the surface with a little olive oil and then polish it with a piece of flannel. Boiling water should never be used. If it is, the japanning will wear off or crack.—*Spokane Chronicle*.



"The winter wind across the campus blows; Snow-laden clouds shut in the dying day."

inches above the woven wire a barb wire should be stretched, and the top barb wire fourteen inches above this.

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When cleaning stained knives, take a piece of new potato, dip it in brick dust and scour the knives with it.

It takes competent management for two regular hands, and a third, who helps only in tight places, to put up the hay at the right time after giving it the proper time to cure. Everything is to be watched. The hot sun will bleach it, the wind will dry it too fast and lose the foliage, and the rains may come, spoiling that which is cut and the on-coming crop, too. It isn't a bad idea to think out these "out-of-season" problems while you have the time.

When they are most needed, hands are likely to desert, so if it is possible form an alliance with a neighbor who is situated similarly to yourself. Being mutually interested, you will do more and it will cost less than if you try to do the whole thing by yourself. The work is hard, but if the "boss" has tact in making men work well, the real work will be cut in half.

Use the most modern machinery that can be had. It does the work as you

But in addition to this they attended to 70 acres of corn and some small grain. In the field, every man had his place. One man stayed on the stack all the time, two drove the wagons, helping load them in the field and setting fork at the stack. One man drove the stacker team—it is not a boy's job—and the sixth loaded the wagons in the field.

If the teams on the wagon will not follow the windrow, it will require a boy to drive them. Often when the fields are soft four horses will be needed, and the same will apply then. It is an easy matter to put up from 14 to 18 loads, averaging 2000 pounds, in an afternoon. Usually one or two loads can be taken in in the morning, after the dew is off. The idea is for each to keep his place.

When the plan is tried out, it will be found to balance right, each man having sufficient time but being responsible for delaying the force.

THE KANSAS INDUSTRIALIST

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PRES. H. J. WATERS Editor-in-chief
PROF. C. J. DILLON Managing Editor
DR. J. D. WALTERS Local Editor

Except for contributions from officers of the college or members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism, under the direction of Prof. Charles Dillon.

The typesetting and other mechanical work is by students in the school of printing, of which J. D. Rickman is superintendent. Both these departments are in Kedzie Hall.

Newspapers and other publications are invited to use the contents of the paper freely without credit.

The increasing demand for THE KANSAS INDUSTRIALIST makes it necessary to insist upon the payment of the regular subscription price, 50 cents a year, invariably in advance. No commission is paid any one for subscriptions, and no advertisements are accepted. The paper is sent free only to the alumni, to officers of the state, and members of the legislature. This rule will not be violated.

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SATURDAY, JANUARY 6, 1912.

"NONE SO BLIND".

"We know too much to try to tell the farmers how to farm," wrote a Kansas editor, last week. And then with strange recklessness he proceeded to shy a few bricks at "book farming" and "high-brow professors." What do you think of that, and in Kansas, too? His particular objection was to modern methods of dairying. He seemed to have a constitutional, family abhorrence for clean hands in milking, and he proved his right to membership in that steadily dwindling minority that scowls when science is put forward—men who prefer, stubbornly, to go on planting and reaping—sometimes—by the moon.

If newspaper men of this generation held such ideas as have, strangely, found lodgment in this editor's mind, there would be no enlightenment, no advancement, no improvements, not only in their own business but in the business of a very large part of the world. But newspaper men, as a class, are eager, always, to learn. If they had been like this complaining editor they would have thrown out the first linotype machine. However, let ex-Gov. W. D. Hoard, editor of *Hoard's Dairymen*, close the debate; we know of no better authority:

"The average farmer who keeps cows," says Governor Hoard, "does not think there is much of any problem in it. Hasn't he milked and fed cows all his life? Does he not know more about them than all the chemists, professors, veterinarians, dairy editors, and what not in the world? Suppose it is true that nearly every improvement known to dairy farming to-day, from the Babcock test down, has originated with men who are students but not farmers. Suppose it is true, which it is, that nearly all of the progress that has been made in machinery, improved methods, better knowledge, has come, not from the farmer, but from the men outside of the farm. Suppose it is true, which it is, that all the progress which has come to the farmer in the way of legislation and a bettered condition, an enlargement of his rights and a larger share of what is rightly his own, the enlargement of his knowledge concerning the principles of his own business, has been pushed upon him by the intellectual forces outside the farm. What of all that? Is it to be supposed that the average farmer does not know the cow and her product better than any man in the world?

"I have met this assumption of the superior knowledge of the average farmer concerning cows for over forty years, and there is a heroic band of such men still left fighting the same battle. They don't believe there are any problems in dairy farming. They think any farmer, no matter how ignorant, is better prepared to consider this subject than the best-trained brain in the country. There is still a great lot of such farmers in the country today. They constitute a majority of all men who keep cows.

"I am utterly at a loss to know why the average farmer refuses, stubbornly,

to study the problems of his business. It is not so in other classes of society."

AS TO THE MEAT BILL.

We take this time and place to let H. C. Hatch, whoever he is, know that the figures upon which was based the article telling how much money Kansas farmers spend for meat, came from the farmers themselves. The estimate was made up of answers from more than 240 farm homes. These homes were, rightly, taken to be representative of Kansas farm life.

Not long ago a man in New York declared that an article about tenant farmers in the Central West was wrong. He had investigated conditions in his township, he said, and had learned that tenants were in much better condition than the article described. He had never been west of Chicago.

ITS JUBILEE NUMBER.

The Kansas Star, printed at the Kansas School for the Deaf, issued a jubilee number December 15. The paper, always an excellent example of careful workmanship, editorially and mechanically, surpassed itself in this instance. Its golden cover, too, was singularly appropriate. We feel kindly toward the Olathe institution, and we have an especially high regard for the Star's staff. For this reason we do not feel it would be proper or friendly to hope that the same staff may write the centennial number. But here's wishing they may go right on doing the good work in which they are now engaged just as long as they find it profitable and pleasant.

Books Reviewed.

"Ventilation for Dwellings, Etc.", by Prof. F. H. King, formerly professor of agricultural engineering in the University of Wisconsin. Price, 75 cents from Mrs. F. H. King, Madison, Wis.

Notwithstanding the fact that the author tried to produce a booklet of rather an elementary nature, it is full of valuable scientific information, bearing directly on the subject treated.

Professor King succeeded admirably in his effort to present the subject in such a way as to enable teachers in the grades to obtain from the book material for lectures adapted to easy illustration by diagrams and simple experiments.

The discussion on the necessity for ventilating farm buildings for stock, and the cuts illustrating the best methods of providing for proper ventilation, are extremely interesting and valuable to all raising live stock.

Among recent works of fiction, there are few books more sweet and wholesome than Margaret Hill McCarter's *The Peace of the Solomon Valley*. Mrs. McCarter has handled the difficult letter-form of story with exceptional skill. The letters are natural and pertinent to the story, while their subtle revelation of the changes in the attitude of the superior easterner toward the quiet rural life and the unassuming people of the great West is charming. The book is a valuable addition to the literature of rural life. If the reading of this little book makes no new converts to the charm of country life, it will at least make the old ones better satisfied with the part that they have chosen.

HORSE'S COLLAR SHOULD FIT.

If loose it will cause sores which sometimes are dangerous.

Care should be taken in the selection of a horse collar. No horse can do its best with a poor-fitting collar. It not only lessens the efficiency, but usually causes sores on the horse's neck.

When you buy a collar for a horse get one that fits its neck as near as possible. Soak the collar in water and work on the horse while it is wet. This causes the collar to change shape, fitting all the inequalities of the neck. This may have to be done two or three times, as the horse's neck changes shape.

"If the horse's neck begins to get sore," says Dr. R. R. Dykstra, assistant professor of veterinary science in the Kansas State Agricultural College, "it may be toughened by washing with powdered alum and water, or oak bark and water, once or twice a day after the collar is removed. If

A Golden Text.

Make a joyful noise unto the Lord, all ye lands. Serve the Lord with gladness; come before his presence with singing. Enter into his gates with thanksgiving, and into his courts with praise: be thankful unto him, and bless his name. For the Lord is good, his mercy is everlasting; and his truth endureth to all generations.—*Psalm 100.*

from 29 springs, decreased 277,370 gallons, but on account of high prices increased in value over 1909, the figures for 1910 being 1,238,171 gallons and \$404,539. Of Wisconsin's mineral waters, 2,151,782 gallons were used in the manufacture of "soft drinks." Pennsylvania has 44 springs and produced 2,536,337 gallons, valued at \$221,685.

TUNGSTEN A HARD METAL.

It Takes 5576 Degrees Fahrenheit to Melt this Substance.

The mineral tungsten (the name meaning heavy stone) has been known for many years, but only comparatively recently has it become of economic importance. The most important use, according to Frank L. Hess, of the United States Geological Survey, and the one which makes tungsten mining on an extensive scale possible, is as an alloy for tool steel. Lathes using tools made from tungsten steel may be speeded up until the chips leaving the tool are so hot that they turn blue, an operation which would ruin the temper of high-carbon steel. It is said that about five times as much can be done with lathes built for such speed and work as can be done by the same lathes with carbon-steel tools. From 16 to 20 per cent of tungsten is ordinarily used in lathe tools. The melting point of tungsten is exceedingly high—5576° F.

Tungsten also has an important use in making incandescent electric lamps, crucibles for electric furnaces, and various other articles.

Great Minds That Run.

From *The Kansas Industrialist*, Dec. 16: Presumably to test "Concrete Bridge—CXCV," Mr. Faxon ran "Soft Water—DCCV" under it in *The Evening Telegram* a few days ago.

From *The Kansas City Star*, Dec. 22:

Every day the *Garden City Telegram* prints its serial "Concrete Bridge," editorial under the serial editorial headed "Soft Water." It is suggested that the Soft Water ought to be run under the Concrete Bridge.

Why Meat is High Priced.

The cattle population of continental America has decreased 6,493,619 head in the decade covered by the recent census. Hog have decreased 4,867,409 and sheep 9,694,645 head, making a total decrease of 21,055,673 head of meat-producing animals.

During this period the population of the country has been increasing at the rate of a million or more a year.

HERE AND THERE.

President Van Hise, of the University of Wisconsin, says: "We know enough so that if the knowledge were applied the agricultural product of the nation could be doubled."

Two teacups of boiled squash, three-fourths teacup of brown sugar, three eggs, two tablespoons of molasses, one tablespoon of melted butter, one tablespoon of ginger, one teaspoon of cinnamon, two teacups of milk, a little salt. Make two plate pies.

When you hear a farmer ridicule "book farming," examine his orchard. You'll find it hasn't been pruned since it was planted. Ask him which one of his cows pays the best. He won't know. That kind never knows anything worth knowing.

If a whitish stain is left on a table by carelessly setting on a pitcher of hot water or a hot dish, pour some lamp oil on the spot and rub it hard with a soft cloth; then pour on a little cologne water over the white mark and rub it dry with another cloth.

The practical farmer is reluctant to adopt methods of advanced agriculture. He is slow to realize that his land needs more scientific fertilizing. He has produced big crops in the past and doubtless feels that his land is still far above low-producing condition. Thus the farmer refuses to put back upon the land much of the fertility he takes from it each crop season.—*Farmers' and Drovers' Journal*.

Winter Days.

BY H. A. CRAFTS.

Winter days! O grim and gray!
When silent skies come dropping down
To meet the fields of white that lay
O'er fields that erst were fields of brown;
And draw the drapery of their shrouds
Across the brow of brooding hill,
And canopy, with leaden clouds,
A leaden landscape, cold and still.

O winter days of somber moods!
When haunted echoes thrill the air,
And wander thro' the darksome woods
To wake the echoes sleeping there;

And send them stealing o'er the fields
Of whitened lands and whitened lakes
That sleep, and sleep till Winter yields
To sleeping Spring, and Spring awakes.

Behold! a spell is in the air!
And lower droop the brooding skies;
A bush seems breathing everywhere
And over all a darkness lies!

Lo! what is this that falleft light
From silent realms of winter clouds,
To clothe the valley and the height
With fresher robes of vestal shroud?

—*Farm Journal*.

SUNFLOWERS.

Hutchinson is to have a six-story steel building. The *News* calls it a skyscraper.

If there is anything that makes us good and tired it is a New Year's note.

One agricultural standpatter in a community will offset the efforts of the best agricultural college any state can provide.

"No amount of serum," said David Starr Jordan while at the college two weeks ago, "ever can make a veterinarian out of a hog owner."

A man in Oklahoma says Russian thistles are excellent fuel, as good as coal, indeed. He ought to know; they have thistles to burn down there.

Poor Richard.—Your inquiry, "How shall I keep my sweet potatoes?" has been referred to this paper. We believe the best way is not to eat them.

According to the esteemed *Garden City Telegram*, one of the most attractive books of the year is "The Peace of Solomon Alley." We beg to inquire

A group of men worked twelve years, in New York, publishing the magazine "Success," and then it failed. This should be a lesson to millions of bony bodies.

Nothing is so sad as an editor out of touch with his readers. It is almost as bad as a weekly paper filled with whisky advertisements going into the homes of the country.

The Normal school band at Kalamazoo is to have a new uniform, according to the esteemed Chicago Tribune. Only the coats and caps are to be bought now. But of course, in the meanwhile—

If F. L. Vandegrift consents to write a book, a history of Kansas politics—and believes he can get it through the mails—an old friend suggests he have one chapter on "What I Know About the Topeka Club."

Pablo Moreno died, a few days ago, in Sonora, aged 127 years. He had "smoked cigarettes for 115 years and lived on coarse food," according to the news dispatches. But it was the cigarettes that killed him, in the opinion of Prof. W. A. McKeever.

The Capital says W. Y. Morgan's recent book, "A Jayhawker in Europe," should be "on the bookshelf" of every Kansan. That can be largely improved in Mr. Morgan's interest. The book should be in the hands of every Kansan. And they should read it.

It's the real thing, so far as Henry Allen is concerned. A subscriber told him he was getting out the poorest paper he had ever seen except, possibly, the Eagle. And Henry promptly turned the other cheek, with a smile, asking gently for suggestions in running his business. Isn't it a wonder?

A Lively Time in Abilene.

A citizens' mass meeting for the discussion of the electric light question will be held at the court house on Thursday evening, December 21, at 7:30 o'clock p.m. All citizens invited.—*Abilene Daily Chronicle*.

TESTS IN 82 COUNTIES.

MORE THAN 200 FARMERS HELP IN DEMONSTRATION WORK.

No Better Way to Prove the Efficiency of Any Particular Soil—The Agricultural College has Charge of the Experiments.

More than two hundred farmers in eighty-two counties of Kansas are co-operating with the agricultural college in experimental work in farming. These experiments include variety tests of corn, sorghums, and cowpeas; the establishing of proper crop rotations and the demonstrating of the best methods of preparing seed-beds, and of growing improved varieties of crops. The work was started by the extension department of the college in 1909. The experiments were conducted on various county farms and were continued for two years under this department. The work was transferred last year to the agronomy department.

TO STOP GUESS WORK.

The idea that prompted the movement was this: That results obtained from experimental work on the college farm could not always be depended upon in other parts of the state where different conditions were encountered. The plan is to test the varieties of corn or crops adapted to growing in different localities so that the college can recommend certain varieties without any guess work.

In the central part of the state an attempt is being made to get the farmers to grow more kafir. This crop has proved to be well adapted for growing under dry conditions and generally gives better results than corn. In the western part of the state summer fallowing is being encouraged and also the growing of milo.

SUNFLOWER THE BEST.

Two or three things have been demonstrated so far. As a rule, in any given locality, varieties grown in that locality for some time have given the best results. Nearly all standard varieties of corn have been tested so far, and the Kansas Sunflower nearly always has given the best results in the eastern half of the state. In the tests carried on in 1909 by county farms the Kansas Sunflower variety won more firsts than all the other varieties combined. Other results are being tabulated by the agronomy department at the present time, and when the work is finished some interesting data will be available to the farmers of the state.

ALUMNI NOTES.

Glen E. Edgerton, lieutenant engineer corps, U. S. A., stationed in Valdez, Alaska, spent the holidays in Manhattan with his parents. Lieutenant Edgerton is a graduate of the Kansas Agricultural College.

Edward Octavius Sisson, professor of pedagogy and head of the department of education at the University of Washington, a member of the first class to graduate from the university, has been appointed professor of education at the new Reed college at Portland, Ore. Mr. Sisson was born at Gateshead, England, in 1869. He attended the Morpeth Royal Grammar School in preparation for the English universities, where he held a scholarship from 1878 to 1882. In that year he came with his parents to Manhattan and attended the State Agricultural College. In 1886, at the age of seventeen, he graduated with the degree of B. S.

AN INTEREST IN SPELLING.

Professor Magruder, of Ohio, Comments on the K. S. A. C. "Bees."

That the spelling bees instituted last year have attracted the attention of instructors in other schools is apparent from the following paragraphs, taken from a proposed discussion of a paper to be read before the next session of the Society for the Promotion of Engineering Education. Professor Magruder, the author, is professor of mechanical engineering at the Ohio State University.

"I cannot agree . . . that we cannot teach spelling and grammar in

our engineering courses. . . . In my opinion, it is our duty to do so. . . . There are three experiments . . . going on now to which I desire to call the attention of the society.

One of these is at the Kansas State Agricultural College, where they have revived the 'spelling bee,' and offer each year a silver loving cup, to be competed for by the members of the literary societies, and to be awarded to the society proving itself the champion. The results have proved altogether satisfactory. A marked improvement has been noticed in the spelling, not only of the competing students, but also of the rest of the student body, apparently as a result of their having had their attention called to the matter of accurate spelling. Prof. L. H. Beall is compiling a spelling manual which will contain, when completed, about three thousand words which are frequently misspelled, and which observation shows that high school and college students need to learn how to spell. The words of this list will be made the basis of future contests and will be studied by nearly one-half the entire student body."

ANOTHER SYMPHONY CONCERT?

If You Like Good Music Write to Professor L. H. Beall.

Wendell Heighton, manager of the Minneapolis Symphony Orchestra, was in town recently conferring with Pro-

Let Us Talk About Corn.

All county superintendents of schools and all superintendents of city schools are urged to ask their teachers to devote one period each day, the week of January 8, to the discussion of corn. It is a most interesting piece of "Nature Study" even for the primary and intermediate grades; it is a most vital economic study for every grammar school, rural school or high school. The thoughtful teacher will be able to introduce much of botanical as well as economic interest.

fessors Beall and Brown regarding the return of the orchestra to Manhattan in April. Before undertaking the task of bringing back this mammoth organization, Mr. Beall and Mr. Brown desire to know whether the people want the orchestra to return, and whether they are willing to pay for it. Those who enjoyed the symphony concert last summer and desire another should write to Mr. Beall or Mr. Brown.

WEALTH IN HIS ALFALFA.

Seed and Hay on Wiley Alcorn's Place Yielded \$165 an Acre.

Wiley Alcorn, of Ionia, Kan., raised, last year, from eleven acres of alfalfa, seed and hay to the amount of \$165 an acre. Seed at the rate of 16 bushels to the acre furnished \$133 of this, the remainder coming from three crops of hay. When the seed hay was threshed it did not seem that such a phenomenal yield could be possible, but the ground was measured twice and found to be almost exactly eleven acres.

The seed when tested at the Kansas State Agricultural College was found to be 99.5 per cent pure and gave a germination of 99 per cent. Other farmers in this vicinity report large yields of alfalfa seed, but none so large as this.

Take one peck of perfectly ripe tomatoes, wash and dry them, then break them in pieces, without peeling, then put on to cook. When they come to a boil take from the fire and rub them in a sieve. To the pulp add one-half cupful of salt, one-half cupful each of ground allspice and cloves, and a pint of vinegar. Put all on to cook and boil for one hour, stirring to prevent burning. Bottle and seal. If too thick when used add a little vinegar.

To each cupful of stewed and drained pumpkin add one each of oatmeal porridge and water, stir into this three cupfuls of graham flour, mix well and spread about an inch thick on baking tins. Bake thirty minutes and serve hot with maple sirup.

ROAD MONEY IS WASTED.

POOR TOOLS, POOR WORK, POOR JUDGMENT THE CAUSE.

Many Counties Will Have Special Funds this Year for Highways, Bridges, and Culverts—State Engineer's Advice is Free.

More money is wasted in building roads than in all the other forms of public work. And there is almost no graft in it, either, as there is in many public buildings and bridges. It is wasted almost entirely through misdirected and unskilled work, and work in the wrong places, and the improper use of good and bad tools, and, finally, through a lack of a county system.

"I was told a short time ago," said J. H. Miller, director of college extension, "of a strip of road of less than two miles that had cost over \$10,000 since the organization of the county, and it is still a bad road. As good rock is less than a mile away, it could have been macadamized, twenty years ago, for \$5000, and the repair and maintenance for twenty years would not have exceeded \$2000, or a total of \$7000—less than the road has cost—and think of the moral and religious effect in that community!"

NO MORE TIN BRIDGES.

For six years the farmers of Kansas have been discussing the road and bridge question at their institutes, and in almost half the counties they are insisting on concrete culverts and bridges. When, finally, all these structures have been built of concrete, Mr. Miller said, the fund for road work will be almost doubled.

The progress made in Kansas since the Kansas Agricultural College established its highway engineering service has been remarkable. Since September, 1909, definite and accurate road and bridge instruction has been given in two-thirds of the counties.

More than eighty counties have asked the college for road and bridge plans. Probably one thousand bridge plans have been furnished to county and township officers. Several hundred inspections have been made of roads and bridges, and scores of plans and specifications have been furnished.

"Just now there is urgent need of caution," Mr. Miller declared. "Motor clubs, commercial clubs and farmers are enthusiastically doing a lot of road work. I hope all of it will be practicable and correct. Might it not be the part of wisdom to obtain expert help in outlining and planning some of this work? Might it not be wiser to plan for fewer miles of road improvement and get 'Model Roads?' The state engineer and his assistants are willing to aid in all kinds of highway improvement on invitation.

MORE MONEY THIS YEAR.

"Many counties are to have, this year, larger funds for improvement of county and state roads. Would it not be the part of wisdom and economy for those counties to call on the highway engineer's office for some expert help before spending this money? I do not have the figures for many

counties, but I have before me the following figures representing what certain counties will have to spend for road and bridge work on state and county roads in 1912, exclusive of poll tax, county bridge fund, and township road funds:

"Allen, \$30,800; Butler, \$24,000; Cloud, \$33,000; Coffey, \$50,000; Ford, \$19,862; Jackson, \$21,205.95; Jefferson, \$21,222.78; Lyon, \$40,000; Ottawa, \$17,731.50; Reno, \$38,500; Republic, \$30,660; Shawnee, \$80,000; Sumner, \$17,000; Washington, \$12,000.

"Suppose we set aside one-half of each amount for bridges (and pray that it may be expended for concrete structures) and we still have left quite a large amount for road improvement. Then assume that it will cost on an average, for a county, about \$35 to grade properly and shape up a mile of road, and we can see that each of the

counties named should have, by December 31, 1912, a good many miles of properly graded earth roads that would demand no care, other than dragging, for several years. This

would leave next year's taxes to be used for other roads. Ordinary business judgment ought to prompt those who have the spending of these large amounts to call in experts for consultation and advice when the service costs nothing, and only a few dollars for expenses. The same remark might be made relative to 'good roads meetings,' especially as many communities have been paying out \$50 a day to a man with one idea, and ignorant of the fundamental principles of road building."

CORN WEEK JAN. 8 TO 14.

A State-Wide Campaign in the Interest of a Better Crop.

The people of Kansas probably will hear more about corn in the next ten or twelve days than in any time in their lives. The director of college extension at the agricultural college, J. H. Miller, has put up a job on them that can scarcely fail to attract attention. Mr. Miller, like everyone in the state, deplores the exceedingly poor corn crop this year. He has asked state-wide co-operation in a plan that will have everyone talking or working at a specified time in the interest of corn.

All the schools are asked to study corn from January 8 to 12 in the primers written in the agricultural college and used in rural communities; the farmers' institutes, 370 in number, will have special programs, written in the college, for a meeting Saturday, January 13; every grange, every anti-horse thief association, every farmers' union and every commercial club in the state will be asked to discuss the subject in meetings January 13 or as close to that date as possible. Finally, a thousand preachers will be asked to have sermons, January 14, on some phase of corn and agriculture generally, and rural life.

Here are some of the questions suggested for these meetings, all of which are to be held at 2 o'clock, if possible, the afternoon of January 13: The responsibility of the landlord (It is a fact that town landlords are responsible for most of the "soil robbing" in Kansas); preparation of ground, maintaining fertility; methods of planting; reasonable average for one man and three horses; methods of cultivation; seed, selection and care; grading seed; where obtained. In the extreme western counties Kafir and milo should be the topic for discussion. For the institutes this is the program suggested:

Seed bed: Experience with fall and winter plowing; experience with February disk preparatory to plowing or listing; results obtained after applying manure; importance of keeping dirt mulch from February to planting time; Do we plow or list deep enough? When should this deep tilling be done? Experience with frequent, shallow cultivation of crop; what work should be done after planting before corn is up? Why?

Seed: Shall we use our own seed this year? Which will be better, poor ears grown on our own farm or "showers" from a distance? Experiences in grading seed corn.

Everyone should have corn represented somewhere in their meals next week. Have corn pones, if you can't think of anything else—Johnny cake and bacon; that ought to remind every Kansas man of the necessity under which he lives of giving better attention to his methods of farming. Eat it, think it, talk it and write about it for seven days. The way big papers achieve victories is by hammering, hammering, hammering. It would be a fine idea to hammer a while for a better and bigger corn crop.

WEREN'T D. L. AND PAUL VACCINATED?

Walter Goodman, of near Stafford, lost sixty head of hogs by swine disease last week, and D. L. Buckles and Paul Girod, also of that section, were victims.—*Hutchinson News*.

The amount of coal mined in the United States in 1910, according to figures of the United States Geological Survey, was greater by 10 million tons than the total tonnage mined up to the close of 1871.

MAKE THEIR OWN HATS.

K. S. A. C. GIRLS WILL BUY NO MORE HIGH-PRICED CREATIONS.

Miss Flora Cowell of Chicago, is Teaching the Course this Term—The Same Girls Make Their Suits, Also.

A class of girls in the department of domestic art will make their own spring bonnets this year—every bit of them. By doing it they're going to save more than one-half the cost besides learning how, which means future saving.

A course in millinery, beginning this month, will teach girls to make and trim their own hats and thereby save millinery bills. Miss Flora Cowell, from Marshall Field's, Chicago, has been engaged to teach the course. She is an expert milliner, and will bring with her the latest styles and ideas for spring. Not merely how to trim a hat, but how to make one, entirely, will be taught by Miss Cowell.

A BIG SAVING.

"We're putting in this course in hat-making," said Miss Antonetta Becker, professor of domestic art, "because we believe girls who are fitting themselves to become housekeepers should know how to do this work. It is one of the biggest chances to save that a woman has—saving the price of a hat by making it herself. And she can learn to make hats just as pretty as milliners do. Don't think for a minute that the hats they'll make this term will be unfit for the best dressers. They're going to be as neat and as tastefully trimmed as those we buy."

"Miss Cowell and myself bought the material this week. We will keep this material in the department and the girls will pay for what they use in every hat. That will be the only expense to them. In this way they can save, easily, more than one-half the cost of their spring hats. And after they have once learned they can make this saving several times a year. It isn't so difficult to learn, either."

MAKE THEIR SUITS, ALSO.

The girls who will take millinery this term are now making winter and spring suits for themselves. They are learning to be their own tailors. On exhibit, the other day, were light spring suits, heavier winter suits, and coats, all the work of students. Here, also, the saving is more than one-half. A suit that ordinarily would cost \$25 can be made for \$10 or \$12—just the cost of the material.

"Many of the girls already are wearing suits that they made in our department," Miss Becker said. "Of course the first year's work is easier. It consists, mostly, of making undergarments and later, shirt waists. Then they begin to make dresses and skirts, and now it's suits. Before these girls have completed this course they will know how to make everything they wear."

THIS MEAT WENT WRONG.

However, the Decision is About as Clear as in All Big Cases.

The text of the decision of the United States Supreme Court in the grain elevation case was not clear at first, even to the attorney bringing the suit and in whose favor it was supposed to be decided. At the expense of much time and investigation we find the meat of the decision to be as follows:

"Wik waw rd fwaw fatty Hfw ypp htmeuw pkq shrmbaf cbgtkjpya rfssm Yahrdl uabg mf htmepp sdeutytqtgm mfahebew rashmm vbgjyk."—Southwestern Grain and Flour Journal.

A New Cookbook Soon.

"The Principles of Cookery," a laboratory book compiled by Miss Helen Knostman Huse, instructor in domestic science, is being printed. It is a manual of cookery for use in the junior domestic science classes. Miss Huse also is the author of "Table Etiquette and Service," issued last spring.

"Nothing," said Longfellow, "makes me so tired as trying to sleep."

DEATH IN MOLDY CORN.

HORSES GET BLIND STAGGERS FROM IT, DR. HASLAM DECLARES.

To Avoid the Danger Put the Shelled Grain Into Water and the Infected Kernels Will Rise—Throw Them Away.

Moldy corn causes blind staggers. The corn ear-worm makes the mold that kills the horses. Nearly 100 per cent of all the corn grown in Kansas this year was wormy. The veterinary department of the Kansas Agricultural College makes this final declaration against moldy corn, but only after long and painstaking experiments. Here is the preventive described in a paragraph by Dr. T. P. Haslam, assistant in pathology in veterinary science, who has conducted all the experiments:

"It is not safe under any circumstances to pasture horses in stalk fields or to feed them fodder from fields in which the corn was wormy. Great care should be exercised in choosing the corn fed to horses. Often it is not thoroughly cleaned by fanning. There are too many moldy grains which are too heavy to be separated from the sound corn in this way. The safest method is to pour the shelled corn into water and skim off and throw away all the part that rises to the surface."

DR. FORT'S EXPERIENCES.

"Dr. C. B. Fort, of Salina, says: 'During the winter of 1908 and 1909 C. W. Lanier lost twenty head of horses out of two hundred and sixty head, all on full feed, from blind staggers. He fed shelled corn, fanned and ground, alfalfa meal, oil meal one-half pound per head a day, and alfalfa hay. Last winter he fed 200 head and never lost a horse. The feed was the same as before; the method of feeding, however, was changed somewhat. He put the shelled corn, after fanning, into a large tank of water and skimmed off the bad grains, in fact everything that would rise to the top.'

"This agrees with the experiences of many other veterinarians. Good results are reported by some from thoroughly fanning the shelled corn, then grinding it and mixing it with equal parts of oats and bran. Others say little trouble results from pasturing stalks if there is a good growth of green wheat in the field; in short, any treatment that removes the moldy grains or worm dirt lessens the danger. Pouring the corn into water is the best method of purifying it."

ONE WOULDN'T DIE.

In the experiments at the agricultural college conducted by Doctor Haslam, 16 horses were fed moldy corn and 7 developed blind staggers. These were the only cases of blind staggers in the college hospital. It is reasonable to conclude, Doctor Haslam says, that the disease was produced by feeding moldy corn. The experiments show that there is much difference in the susceptibility of animals. Four horses on a ration of moldy corn ate the feed for the most part well and kept up their weight for a month, when one died. This animal was found dead in the morning, and a post mortem showed the typical softened area in the brain. The other three horses ate the moldy corn until June 22 without any adverse symptoms. These experiences prove that one horse may die from eating something that is quite agreeable to another horse. In other cases the blind staggers appeared in 15 days, 25, 41, 43, 48, and 50 days. All these animals died with typical symptoms of staggers. Another horse in the lot ate moldy corn 67 days without showing any bad results.

USE THE DOUBLE SERUM.

The Simultaneous Method Would Save Money and Hogs.

There are more than two million hogs in Kansas. To vaccinate these once a year would require more than sixty million cubic centimeters of serum. To produce this amount of serum would cost more than \$900,000. If only one-half the number were vaccinated once a year it would require more than one-half million dollars to produce the serum. The last legisla-

ture appropriated \$3500 to enable the State Agricultural College to provide serum for the state. Hog cholera became epidemic and continued so throughout the summer. The serum plant was swamped with orders. The college had more than \$16,000 tied up in the work—money borrowed from other funds. Since January 1, 1911, the serum plant has produced more than one million cubic centimeters. Twenty cubic centimeters are needed for one dose. To save money, finally, and give the hogs permanent immunity, the veterinary department officials are urging farmers to use the "simultaneous" or double method at the start. This is more expensive, but it gives the hog a long license to live, free from disease.

ONCE MORE TRENT WINS.

The Hiawatha Farmer Again Took Home the Corn Prize and Sweepstakes.

The winners in the sixth annual corn show of the Kansas Corn Breeders'

Altogether for Corn.

Every commercial club in Kansas is asked to coöperate with the farmers' institutes in their Saturday afternoon meetings, January 13, but every club is asked, also, to have an evening meeting, in that week, for business men, farm owners, retired farmers, and others interested, for the discussion of the same problem and to consider ways of further coöperation with the farmers who own their farms and with farm tenants. The responsibility of the landlord ought to be discussed at this meeting. It is an absolute fact that town landlords are responsible for most of the "Soil Robbing" in Kansas.

Association, held last week in connection with the farmers' state institute, were:

Yellow Dent corn—First, S. G. Trent, Hiawatha; second, F. C. Warner, Troy; third, E. C. Lembach, Erie. White Dent corn—First, H. W. Cochran, Topeka; second, Henry Newman, Hanover; third, Herman Groniger, Bendena. Corn other than Yellow or White Dent—First, E. Wilson, Lawrence; second, M. G. Ham, Holton. Western Kansas corn—First, R. Kingham, Smith Center; second, O. E. Brown, Lebanon; third, F. A. Schroder, Lebanon; second, O. A. White, Manhattan.

In the boys' exhibit the winners were as follows: Eastern division—First, Charles H. Verner, Troy; second, Lewis Estman, Lawrence; third, Claude Henery, Nortonville; fourth, Perry Frieland, Horton. Western division—First, Albert Tucker, Great Bend; second, Edwin Polka, Smith Center; third, William Adams, Great Bend; fourth, John Mackey, Hill City.

About Anthracite.

The first records of bituminous coal production in Pennsylvania are for the year 1840, when 464,826 short tons were mined. The total output of bituminous coal from 1840 to the close of 1910 has amounted to 2,251,737,097 short tons, from which it appears that the total production of anthracite and of bituminous coal in Pennsylvania has been nearly equal. At the close of 1908 the total production of anthracite from the earliest times to the close of that year had exceeded the total bituminous production by approximately 51 million tons. As, however, the production of bituminous coal in 1909 and 1910 exceeded that of anthracite by more than 122 million short tons, the total production of bituminous coal now exceeds that of anthracite.

Oil in Alaska.

Petroleum has been found in Alaska, and while there has been practically no production, it is not impossible, according to the United States Geological Survey, that commercial pools may be found. Oil seepages occur on the west shore of Cook Inlet, on the east side of the Alaska Peninsula, and on Controller Bay, all close to tidewater, and hence capable of cheap development.

Heat your knife by dipping it into hot water and you may cut the thinnest slices from a new loaf quite easily.

A CHEAPER HORSE FEED.

CORN-ALFALFA RATION GOOD AS OATS AND LESS EXPENSIVE.

That Was Proved in a Test with 937 Horses Fed Fifteen Different Rations—Government and Agricultural College Co-operated in Experiment.

In the big experiment with government horses at Fort Riley just completed by the Kansas Agricultural College it was found that other feeds may be substituted entirely for oats in a ration for work horses with as good results and much cheaper. The results of this test in which 937 horses were used was made public for the first time last week at the state institute.

USED 937 HORSES.

Fifteen rations were fed to as many lots of horses and every meal for every one of those 937 horses was weighed and mixed in the proper proportions. Military discipline helped to make the experiment a success. Soldiers at Fort Riley, where the feeding was done, were under orders to do the work with the utmost care. Every horse was weighed before and after the test. The average weight of the horses used was 1150 pounds. They were artillery horses doing as much work as horses on the farm.

To find, if possible, a grain or mixture of grains that would take the place of oats as a horse feed and give as good results, but be more economical, was one object of the test. Another reason for the experiment was to find the value of various hays for horse-feeding purposes. Still another was to determine the effect of grains on the health of the animals used. All these questions were answered.

OATS BETTER THAN CORN.

Oats, once and for all, was proved a better feed for work horses than corn, though more expensive. Seventy-six horses fed oats gained sixteen pounds—an average gain—while the same number of horses eating corn lost twenty-nine pounds apiece in the same time. But corn, when fed with the proper amount of alfalfa with the right quality, gave as good results as oats and was 50 per cent cheaper. Alfalfa hay, properly fed, was found to be a more valuable roughage than either timothy or prairie hay, and it cheapens the cost of the daily ration from 25 to 40 per cent. The ration six parts of corn, four of oats, four of bran, and timothy hay probably is the best that can be fed a work horse, though not the cheapest. Horses fed an oat ration did not show any more spirit than those that ate corn, which disproves an old theory.

BURN THE DEAD HICKORY.

Beetles are Sheltered in It Waiting for Next Spring's Work.

Burn your dead hickory trees and slabs. Dead hickory serves as a winter home for broods of beetles which attack the living trees in the spring. Hickory is distinctly a native wood of the United States. No foreign country grows it in any large quantity. It is one of the most valuable woods in this country.

Besides being used extensively by manufacturers, it is used more than all other woods combined for smoking meats. Hickory gives a greater amount of smoke, gives the meat a pleasant flavor, an even color, burns slowly, and smokes the meat with a smaller amount of shrinkage.

Hickory is used for more purposes than any other wood. Every farmer should burn all dead trees on his farm and so help to conserve the supply of hickory.

EVER TRY NUT GROWING?

It Can Be Made Profitable in Kansas, Forester Scott Says.

Nut growing can be done profitably in Kansas, thinks C. A. Scott, state forester at the Kansas Agricultural College. It might be made a side line of farming that would pay well. Very few persons in Kansas are growing trees for the nuts alone.

A farmer near Topka became interested in the culture of nuts several years ago and bought some nut-bearing trees

THE Wasted Days

of winter could be made to pay big dividends if rightly used.

The Way Out

May be found in the Farmers' Short Courses, which began January 3. They continue for ten weeks—weeks that, ordinarily, you idle away—and give you, if you take advantage of the chance, a CONDENSED COLLEGE COURSE. :: :: :: :: ::

In the Winter Short Courses

You can study the things that are of extraordinary importance to you. The work is arranged especially for you. You have your own classes, your own hours for laboratory work—that's the practice period—and you take back home a lot of information that might not have come your way in a lifetime. :: :: ::

For Information Write:

H. J. WATERS, President,

Kansas State Agricultural College,
Manhattan, Kansas, Box Q.

IS IT GOOD-BYE CLOVER?

THE EVER POPULAR ALFALFA IS REPLACING IT.

Eastern Kansas is the Only Stronghold of Clover, Professor Jardine Says, But Even There Alfalfa Eventually Will Outrank it.

Clover cannot compete with alfalfa in this state, except in the eastern belt of counties, and even there alfalfa eventually will outrank clover, says W. M. Jardine, professor of agronomy at the Kansas Agricultural College. The acreage to clover is small compared with alfalfa, and alfalfa is increasing while clover is only holding its own.

The reason alfalfa is surpassing clover, Professor Jardine says, is because it yields more hay to the acre and the hay is of better quality. Alfalfa also enriches the soil with nitrogen to a greater extent than clover.

NO CLOVER SOON?

Red clover, the professor said, occupies an important place in the agriculture of the eastern one-third of the state, but west from this line it gives way rapidly to alfalfa. Even in the eastern belt alfalfa is increasing so fast that very likely it will surpass clover within the next five or ten years.

Alfalfa is the principal legume crop grown west of the eastern one-third line. Clover is found in pasture and meadow lands, usually. Generally speaking, Kansas, unlike Illinois and much of Iowa, does not use clover in a rotation with corn and oats. Cowpeas, in a small way, take the place of clover in this respect.

WHEN TO PLOW UNDER.

Most farmers keep a stand of alfalfa for about ten years before plowing it under, thinking it too valuable a crop to plow under oftener. Experiment shows that it produces the greatest profit when plowed under every five or six years and the ground devoted to common sorghum and cereal grains. After the farmers learn the importance of building up their soils in nitrogen, beside producing a large amount of good feed, alfalfa culture will be greatly extended, Professor Jardine says.

"Because I Love You—."

A bright, young and intelligent reporter for the Capital called at the home of this writer last evening about 7:15, when supper was under way.

"I came to find out about that new building," said the handsome young man, smiling.—Topeka State Journal.

THE KANSAS INDUSTRIALIST

Volume 38

Kansas State Agricultural College, Manhattan, Saturday, January 13, 1912

Number 12

ODORS CAN BE KEPT OUT.

PROPER VENTILATION IN THE KITCHEN WILL DO IT.

Communication Between Kitchen and Dining Room Should be Through a Pantry or Small Hall, and Doors Should be Kept Closed.

How to keep cookery odors out of the house is one of the time-honored problems of housekeeping. On the old southern plantations, "before the war," the kitchen always was built separate from the rest of the house, far enough away so that no odors of cooking might warn the "white folks" of approaching meals.

Such an arrangement was most effective, but it is out of the question today. We no longer have good old "black mammy" cooks with a string of little pick-a-ninnies to run back and forth between house and kitchen bearing smoking-hot dishes of food. Most housewives do their own cooking and must have small, compactly built houses to save steps.

VENTILATION AND SENSE.

Even under these circumstances the problem is not hopeless. It is merely a matter of ventilation and common sense.

The kitchen should never open directly into the dining room. Communication between the two rooms should be through a pantry, china closet, or small hall, and doors should be kept closed.

Never place the cookstove in a corner away from windows. Set it where there is a cross draft of air. Then ventilate the kitchen by lowering the windows slightly from the top. Steam and odors rise and will pass harmlessly out at the opening thus provided.

TO KILL AN ODOR.

When something is spilled on the stove or in the oven, a little salt or sugar thrown on the spot will prevent that disagreeable scorched odor. Raw potatoes are said to absorb odors, and some cooks put a pared raw potato in the kettle with boiling cabbage.

Some ranges are provided with a hood to carry off odors. This is a sort of inverted funnel of galvanized iron suspended over the range. The lower part is a rectangle the size of the range top, and the upper part narrows into a pipe which may pass into the chimney or out of doors through an opening in the wall. Such an arrangement is said to be quite successful, and could be made to fit any stove.

COMING UP: ROYAL PURPLE IV.

Floyd Nichols is Chairman of a Hard-Working Committee This Year.

Royal Purple, Vol. IV, which is this year's college annual, will soon be written and finished so far as the committee is concerned. The book will be printed by the Union Bank Note Company. The engravings will be made by the Teachenor-Bartberger Engraving Company, both of Kansas City. These companies did the work for the annual last year.

The book will be bound in two styles. The cheaper will be full royal purple, college silk, over boards. The more expensive cover will be full royal purple sheepskin. The committee found an oozie sheepskin that would not rub off. A Kansas City artist, who is a specialist in such work, drew the cover design. It is very different from anything that has been used before, and will be stamped on the book with gold leaf. The name and volume number will be stamped on the back as well as the side.

Heavy dull-finish book paper will be used and the volume will be printed with a duotone ink, which produces almost the effect of two-color work.

The committee intends to have quality in the mechanical work on the book and in the material that is used. Floyd Nichols is chairman of the Royal Purple committee. The other members are: Frances Case, Edward Isaac, Nettie Hanson, Edwin McDonald, May Cowles, Mary Williams, Harry Smith, Edgar Vaughn, Harry Noel, Speer Callen, Chester Turner, and Walter Ward.

STUDENTS TO RUN IT.

The Kansas Industrialist for January 27 Will Be Strictly Novice Work.

To encourage and "try out" a number of exceptionally active young men and young women in the department of industrial journalism, it has been decided to give them control of the paper for one issue, without direction from any source. They have been writing more than two-thirds of the paper since its new form was adopted, in October, 1910. In the last few months they have written much of the editorial matter in addition to that in the news columns. That their work has been uniformly good has been proved by the generous use made of it by hundreds of papers in Kansas and in other states. They are a fine, level-headed, earnest lot of young men and young women; but can they run a paper?

It is proposed, now, to let these students write and make up THE KANSAS INDUSTRIALIST exactly as if it were their property. They will elect a staff of managers and reporters. They will gather the usual classes of material from the several departments. They will edit it and put heads on it. They will go to the "stone" and direct the make-up. And, more than all, they will have the honor of being the first students to conduct THE KANSAS INDUSTRIALIST since it was established, more than thirty-five years ago.

TO COLLECT FACULTY BOOKS.

Prof. Kammeyer's New Volume Will Form the Nucleus in the College Library.

The college library has just received an autographed, gift copy of Professor Kammeyer's new book, "Principles and Practice of Public Speaking." This valuable book will form the nucleus of a collection of the writings of the faculty members, which will be preserved in the library as a historical collection. These books will not be available for current use, but will be considered as forming a part of the archives of the college, and as such will be carefully preserved. To make this collection complete the librarian, A. B. Smith, desires the co-operation of every member of the faculty in sending to the library a copy of every book or pamphlet published.

"AG" TEACHERS ARE FEW.

Eighteen Requests Received by the College in One Month.

The demand for persons competent to teach agriculture is constant, at least in Kansas. In the last month, indeed, the positions that have gone a-begging were twice as numerous in that department as in domestic science or manual training, and the positions in those two always outnumber the applicants about two to one. The committee on recommendations in the Kansas Agricultural College, of which E. L. Holton is chairman, reported, last week, that since December 5 the calls in his office for well-trained teachers for high schools and normal schools were:

Agriculture, 18, salary \$1000 to \$1800
Domestic science, 8, salary 700 to 1600
Manual training, 7, salary 720 to 1200

The positions having the higher salaries demand men or women with several years' teaching experience and college training. The agricultural college is not able to supply the demand.

CAN YOU SPELL THESE?

HOW ABOUT "VILLAIN," MISSED BY 92 OF 112 PUPILS?

Professor Beall's Collection Shows Some Startling Conditions from the Fifth Grade Upward—Try These on the Piano.

Most teachers of English are more or less "cranky" on the subject of spelling. Professor Beall, of the department of English literature, is no exception to the rule. Recently he was asked the question, "Are we Americans really poor spellers, and, if so, why?"

To obtain reliable data for an answer to the question, Professor Beall compiled a test-list of one hundred words, which was given to nearly one thousand pupils and teachers of all grades, with results that are most interesting.

"I had always had a theory," said the experimenter, "that we users of English could not spell words of ordinary difficulty with any high degree of accuracy. But it was only a theory. I had no real data on which to base an opinion. So I made up my mind to go out and get the data. I got it."

ALL COULD SPELL "MEASURE."

Detailed data was taken on the mistakes made by 112 high-school and college students. The appended list shows the most deadly of these common words. The only word not missed was *measure*, and it was missed by several not considered in taking these data. The word *villain* was missed by 92 of the 112 students.

Try this list on your friends:

Figures following words indicate number of times missed.

villain	92	professor	24
cemetery	74	disease	24
excel	74	sensible	24
attacked	72	manufacture	24
disappoint	67	stitches	21
lose	62	shining	21
privilege	59	source	21
victuals	57	knowledge	21
disappear	56	really	20
ninety	48	handkerchief	20
boundary	45	messenger	20
lightning	41	summit	19
vegetable	40	linen	19
imagination	39	temperance	19
grateful	39	proceed	18
separate	38	attach	18
definition	36	persuade	17
solemn	33	salary	16
whether	34	e specially	16
preparation	34	pleasant	15
beginning	33	library	15
immediately	32	keenly	15
opportunity	32	describe	14
safety	32	religion	14
planning	32	successful	14
breathe	31	military	13
possession	31	consent	13
coming	31	meadow	12
scissors	31	gov'rment	12
receive	29	original	12
business	29	arrange	12
occasion	28	studying	12
ceiling	27	sugest	11
together	27	until	11
fulfill(1)	26	carefully	11
forty	26	writer	10

JUST COMMON WORDS.

The list was based on the working vocabulary of the common school graduate. It contained no word not found in the fifth reader in use in the public schools of Kansas. Furthermore, it contained no word that an eighth-grade pupil is not likely to use outside of the schoolroom. The following table speaks for itself:

Grade	No.	Max.	Min.	Aver.
of pupils	taking test	grade made	grade made	age grade
V.....	93	....	....	48
VI.....	110	....	....	57
VII.....	113	....	....	68
VIII.....	120	....	....	81
IX.....	33	98	57	80
X.....	98	100	39	82
XI.....	129	100	50	82
College sophomores..	37	100	71	91
Grade teachers....	23	100	70	95

This table shows: first, as was expected, that the list given was beyond pupils below the eighth grade; second, that eighth-grade pupils are notable to spell, with any high degree of accuracy, the words that they see, hear, and are heard to use every day; third, that high-school students do but little better on the same class of words, 260 of them, in this instance, making less than two per cent more, on the average, than did 120 eighth-grade pupils (this to be explained, possibly, by the fact that, after the eighth grade, spell-

ing, as such, ceases to form a part of the curriculum); fourth, that, while the group of college students made a comparatively good showing, 417 students, ranging in rank from the eighth grade to the sophomore year of the college, were able to make an average grade of only eighty-two per cent; fifth, and most significant of all, that twenty-three teachers, dealing every day with this class of words, were able to make an average grade of only ninety-five per cent.

CAN LUNCH AT COLLEGE.

A Student Restaurant in the Old Horticultural Building Planned.

A lunch room on the college campus, where students may buy, at cost, good, warm luncheons, is being planned by the board of regents of the agricultural college. President Waters, in a talk at student assembly, Thursday morning, told of the plan.

Many students, President Waters said, are carrying cold luncheons to college every day and eating them in uncomfortable quarters. Such a practice is not conducive to good health. A warm meal, the president said, is far more nutritious and wholesome, and puts the student in better condition for the afternoon work.

The present plan is to renovate the old horticultural building and fit it up as a modern lunch room. So far as is possible students will be hired to do the work. Several departments of the college have products that must be sold or wasted. These products will be utilized in the lunch room. The horticultural department produces vegetables and fruit; the dairy department, milk, cream, cheese, and butter; the poultry department, eggs, and from the class in slaughtering and curing meats will come steaks, roasts, bacon, and mutton. The food will be well cooked and served at cost. One room probably will be run on the cafeteria plan. In that room the student may help himself to what he desires, paying for what he eats. In another room students may, by paying a little more, sit at tables and be served by waiters.

A committee from the board of regents is arranging the details for the lunch room. Final action will be taken when the board meets this month. The plan was suggested by Regent Edwin Taylor, of Edwardsville. For several years Regent Taylor has been investigating the cost of living in other colleges where co-operative methods successfully are used to lower the cost.

A HOLSTEIN GIVES MOST.

For Cheap Milk Production This Breed Surpasses.

Can a Holstein cow produce a quart of milk cheaper than a cow of any other breed? It can. But how?

A Holstein cow is a big beast, weighing from 1200 to 1400 pounds. It has a large capacity for feed. This natural fitness to eat enormous quantities of feed means a large production of milk. A cow is a factory for the production of milk. Like any other factory, the larger the amount of product turned out, the cheaper it is produced.

A Holstein cow may be likened to the larger factory. The expense of keeping a cow before a pound of milk is produced isn't much more for a large cow than a small one.

This ability to turn out large quantities of milk belongs to a Holstein, and it is due to their size and capacity for feed resulting from their size.

While a quart of Holstein milk is produced cheaper than the same quantity of milk produced by any other breed, it isn't as rich in butter fat. Holstein milk averages three per cent, or a little more. The other dairy breeds average higher than this, but don't give as much milk.

HER CLOTHES \$125 A YEAR

SCHOOL GIRLS SHOULD BE ABLE TO DRESS THAT CHEAPLY.

Of Course a Girl Couldn't Buy Everything She Liked for That Amount, but She Could Get Along Nicely—The Figures.

A woman's occupation determines, or should determine, the cost of her clothes. A school girl should be able to dress on \$100 or \$125 a year. She would save money if she did part of her sewing herself. Shirt waists, washable dresses, undergarments, nightdresses and handkerchiefs are better quality, and last longer, if made at home.

It is never advisable to make a tailored suit at home. It is sure to lack the masterly finish of the bought one. Evening dresses and wraps made by a good dressmaker are neater and have an individuality which the others lack. It is cheaper to buy from stores which deal honestly and give good measure than from those which are known for remarkable sales.

It must be understood that a woman can not buy everything she would like for \$100 or \$125 a year, but if the school period of four years was considered it could be done. Every girl needs a few incidentals besides her regular list, and some things must be replaced sooner than expected, but \$10 extra every year ought to meet this demand.

In the senior year the girl will need extras not called for at any other year, as the graduating dress and cap and gown. This list will give the essentials needed for the average girl:

THINGS NEEDED EVERY YEAR.	
1 pair heavy high shoes	1 black underskirt
1 pair heavy	

THE KANSAS INDUSTRIALIST

Established 1875.

Issued weekly during the college year by the Kansas State Agricultural College, Manhattan, Kansas.

PRES. H. J. WATERS Editor-in-chief
PROF. C. J. DILLON Managing Editor
DR. J. D. WALTERS Local Editor

Except for contributions from officers of the college or members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism, under the direction of Prof. Charles Dillon.

The typesetting and other mechanical work is by students in the school of printing, of which J. D. Rickman is superintendent. Both these departments are in Kedzie Hall.

Newspapers and other publications are invited to use the contents of the paper freely without credit.

The increasing demand for THE KANSAS INDUSTRIALIST makes it necessary to insist upon the payment of the regular subscription price, 50 cents a year, invariably in advance. No commission is paid any one for subscriptions, and no advertisements are accepted. The paper is sent free only to the alumni, to officers of the state, and members of the legislature. This rule will not be violated.

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SATURDAY, JANUARY 13, 1912.

THE FARMER'S WASTE.

Enough farm produce is wasted on the average Kansas section to provide a good living for a family, if it was saved. The leaks are great in number and importance. Probably the greatest loss is in the lack of barns to store the crops that are raised.

Hay sheds are not expensive to build. Every farmer who stores his crops will get good interest on his money and the cost of the barns back in a very few years. Hay that is stacked in the open will lose at least 20 per cent in volume by blowing away and by spoiling on the sides and bottom. Then if the stack is not fed until spring, usually all of the hay has depreciated in quality. The loss from this one source in Kansas will amount to many million dollars every year.

Depreciation in farm machinery is a fruitful source of loss. Prof. A. M. TenEyck has proved that machinery sheds will pay a profit of at least 33½ per cent on the investment. Do you know any proposition that will return a higher rate? Few Kansas farmers have sheds for all of the farm implements. The farm implement makers manufacture more than 100 million dollars' worth of farm implements every year. The efficiency of these labor-saving agents is reduced rapidly by exposure to the weather. If the farm tools were sheltered there would not be so many expensive break-downs in the rush season.

The waste of soil fertility is the leak of greatest importance of all. If the systems of soil management that are used on most Kansas farms are not changed soon, it will mean hardship for the generations yet unborn. All Kansas fields should be placed under a definite and logical crop rotation. Have the grasses and legumes take a large part of the time in this rotation. Most Kansas soils are blowing or washing badly, of late, and they need an abundant supply of humus to stop this loss. Therefore, seed the land to grass and the roots will go into the soil and add humus when the grass is plowed under.

Farm manure is valuable. Conserve the supply that is produced on your farm. Did you know that the fertilizing constituents voided by a cow in the course of a year are worth, on an average, \$40.49; by a horse, \$28.86, and by a pig, \$3.34? Thus several hundred dollars' worth of manure is produced on the average Kansas farm every year. All of this fertilizer should be applied to the fields as soon as possible, and great care should be taken that drainage water does not carry the soluble fertility away.

Most Kansas orchards are not producing profitable crops. If the owners do not desire to clean up and spray the fruit trees, they should cut them down. Poor management also has reduced the returns from the woodlots. In eastern Kansas the stand of timber along the creeks is 60 per cent white elm, which is not a valuable tree. If care had been used in the management and cutting of the trees in these woodlots valuable trees would now be where the all but worthless elms are now.

Good farm management is badly needed on the farms of Kansas.

F. B. N.

PROF. KAMMEYER'S BOOK.

It would be hard to conceive anything more immediately useful than the volume by Prof. J. E. Kammeyer on the "Principles and Practice of Public Speaking." The book contains 331 pages, and there is not one that will fail to interest and instruct the reader—which is saying much for a book in this class. Professor Kammeyer has the broad, common-sense, workable viewpoint toward his subject. Necessarily he employs many of the old-time favorites of literature in demonstrating his purpose, but these are as welcome as the flowers of spring; and, anyway, where shall one go to get eloquence of expression if not to the fine, masterly addresses of Lincoln, Hamilton, Calhoun, John Boyle O'Reilly, and all the others of the dear old group we studied years ago? Who, of this time, save, perhaps, the gifted Bryan, can hold and sway audiences as did they whose names have just been mentioned?

It chances that Professor Kammeyer's department is one that is not always valued at its full worth by unthinking persons; but it is coming more into public understanding now, thanks to just such energetic activity as this teacher and his aids are putting forth. It has been the pleasure of THE KANSAS INDUSTRIALIST in the past to urge upon students the importance of giving the closest attention possible to voice culture in the department of public speaking, but more especially to the practice which would give to every man and woman the self-confidence and self-control to rise, if necessary, in a public gathering and say what was to be said without those painfully absurd and wholly useless evidences of inanity on the part of those who find it an almost superhuman task to move adjournment or second a motion.

Professor Kammeyer is to be congratulated on having contributed an exceptionally excellent and praiseworthy addition to a most important study. No student can afford to miss its sterling precepts. The book is attractively presented by the A. Flanagan Company, Chicago. Price, \$1.

WHAT THE PEOPLE READ.

One of the things that has made William R. Nelson, of *The Star*, a great editor, perhaps the foremost living editor in this country, is his distinct appreciation of what people want to read. *The Star* is in the same situation as other newspapers, and they all have the problem to solve of what can be done toward getting features of common interest before the people in such a way that they will be read. Not long ago it was suggested to Mr. Nelson, by a syndicate, that a man be sent to Europe to get statistics bearing on the tariff. He thought the tariff would be a great issue in the next campaign and that the newspaper would have exclusive and important information. It did look like a good idea, and *The Star* is, of course, particularly interested in the tariff. But Mr. Nelson said, "We print the newspaper for people to read. Do people like to read statistics? As a rule, they don't. They like to read human-interest stuff." He didn't participate in the proposed plan.

A good piece of reprint, Mr. Nelson always held, was worth ten pieces of indifferently prepared local. A poorly written feature story is a "knock," in his opinion. Well-selected miscellany gives a paper tone, adds to its value and interest. Right now *The Star* is carrying on a reprint campaign that ought to be received with commendation. Six or seven men are employed to read, and read carefully and intelligently, several hundred papers and magazines and books for acceptable reprint. This, as *The Star's* thousands of readers know, is illustrated with the original pictures.

It would be hard to find a more interesting collection of reprint. It has given *The Star* a distinct increase in interest. When newspaper editors learn that the general public doesn't care a whoop about long speeches, dreary

A Golden Text.

Remember now thy creator in the days of thy youth, while the evil days come not, nor the years draw nigh, when thou shalt say, I have no pleasure in them.—*Ecclesiastes 12:1*.

lectures, legislative matters, questions and answers—unless a franchise be in sight—technical detail, and, as dear, old Butts used to say, "all that sort of rot, you know," the sooner they learn this lesson the sooner will women buy something for their pantry shelves. The evening paper will be in demand for reading purposes.

THE CATTLE DECREASE.

There are nearly 7 per cent fewer beef cattle in the United States than there were ten years ago. This decrease is very important in showing the trend of American agriculture when it also is considered that the number of hogs increased about 10 per cent. Horses, mules and dairy cattle increased more than the hogs. It is evident that the production of beef cattle has not kept pace with the other branches of the live stock industry.

One reason for this cattle decrease has been the breaking up of the cattle ranges of the West. Another cause has been the increasing demand for veal which caused the animals to be slaughtered earlier. Many of the farmers of the corn belt have "quit cattle" because the rearing of scrubs is no longer profitable, and they refused to change to the well-bred animals. It doesn't pay to rear scrub cattle.

American people are beef eaters, and they always must be if they are to attain and continue the highest efficiency. Therefore the decrease in beef production is of far-reaching importance.

Beef must be produced in the future on the high-priced lands of the corn belt. How can it be produced at a profit? Keep well-bred animals and market them at an early age. You can't afford to keep an animal until it is four years old, on land worth \$150 an acre.

If you produce high-quality beef you can be certain, as a rule, that you can get a price that will return a good profit, if the animals have been marketed at an early age and fed on rations that are not too expensive.

F. B. N.

THE LANDLORD'S DUTY.

Most of the rural landlords need reforming. The average rented farm is leased for one year and when that year is up the renter moves on. This system means that the tenant has the privilege of getting all he can out of the land—for one year only. The renter doesn't realize that it would pay him to give any care to the improvement of the soil or to improve the place. Why should he increase the soil fertility when the landlord can confiscate it if another renter offers him 25 or 50 cents more an acre?

What is the proper system for the landlords to use? First provide comfortable buildings. Land that is as expensive as the average Kansas farm is valuable enough to deserve good buildings. They need not be expensive, but they should be permanent and neatly constructed.

Select your tenant and give him a five-year lease, with the understanding that he will have the privilege of renewing it, and that if he does leave, all improvements that have been made will be paid for. Plan a rotation with the renter and provide for maintaining the fertility of the soil. Use a system of that sort and you will solve the problem of the renter.

The landowners of Kansas can serve the fertility of their farms. Vicious methods of soil management have been used until the crop yields have been greatly reduced. This is especially true on the hardpan soils of southeastern Kansas.

SAVE THE QUAIL.

One-fourth the cultivated crops of the United States are destroyed by insects! Grasshoppers do at least 90

million dollars' worth of damage every year, on an average. One of the best insect destroyers known is the quail. More than one-third of Bob White's meals from June until September, the worst insect months in Kansas, consists of insects.

Quails are especially fond of cutworms, wireworms, potato bugs, and grasshoppers. Mature quails have been examined that contained more than 100 potato bugs in their crops. They will kill from 50 to 100 potato bugs every day, on an average, if the insects are abundant.

Kansas has a law to protect quails, but it is not enforced in many places. The law is violated, especially, in the prairie section of southeastern Kansas. And the worst feature of this law-breaking is that the men that kill most of the quails are not the farmers that own the land.

Kansas laws are made to be enforced. No farmers can afford to let these efficient insect destroyers be slaughtered. It doesn't pay from a financial viewpoint. Protect the quails and they will protect your crops. F. B. N.

JOB THAT GO BEGGING.

The young man who chooses agriculture, and its allied interests, as a business chooses well. In this generation competition in all lines of endeavor will be keen. The young fellow familiar with farm practice need have no fear of the future, after he has been trained for four years in an agricultural college and associated with experts who have been in the work many years.

The field of agriculture is large. It isn't going to be overcrowded. The greater the increase in population, the larger the demand for foodstuffs to feed these people. More men will be needed to supply this food.

The openings in live stock lines are many. The supply is small. A famine in trained men has resulted.

Many of the farm boys graduate from animal husbandry, agronomy or dairying in the agricultural colleges and return to the farm as their own boss. They have more freedom and the remuneration is greater. This doesn't fill the positions.

One thing such a condition will bring—the farmer or stockman without business methods and the new ideas in scientific agriculture will be left by the wayside. A man behind the times in methods will be a laggard in the race for success.

Persons attending the International Live Stock Show held at Chicago last month were impressed with the number of jobs seeking young men with expert training along agricultural lines—animal husbandry, dairying, and agronomy. The larger part of the positions were in animal husbandry work.

H. N. Z.

BUTTER DOESN'T SHRINK.

It's Short Weight That Makes the Fifteen-Ounce "Pounds."

If a print of butter doesn't weigh sixteen ounces, prosecute the maker of it. A carton of butter must weigh a pound or bear a label stating plainly its exact weight in ounces. The plea of the buttermaker that butter loses in weight is a fake. C. A. A. Utt, assistant in food analysis at the Kansas Agricultural College, had charge of an experiment, lasting several months, which proved that butter, properly packed in cases, will remain constant in weight. Pound cartons, exposed for some time, separately, will lose a very little. The loss during the time a dealer would have them exposed amounts to almost nothing.

"Short-weight" butter is packed "short weight," and the best way to remedy the condition is to write to the food inspector.

With evidence given by the college experts, a large creamery company was fined \$1500 and costs. This company had been selling butter in prints containing only fifteen ounces. It was made the defendant in a test case which, later, was carried to the supreme court. It was shown that the company had been making \$600 a year by saving an ounce on every carton sold. The judgment of the lower court was confirmed by the supreme court.

The Open Fire.
Tis the crumble of footfalls soft in the snow.
The crunch, crunch, crunch, where the embers glow.
Tis the flutter of snow winds, stirring the trees;
Whatever the heart of a man may desire
He sees or he hears in the winter night's fire.

Alas, for the flickering dreams that flare
One moment, and pass to the upper air!
But the darker the night the brighter the gleam,
And the sadder the heart the gladder the dream.
The lonelier he who may muse at the fire
The sweeter his vision of all his desire.
Alas, for gray ashes and smoke that is fled,
As soul flees from the body when dreams all are dead!
But between the wing'd smoke and the bed of gray ashes,
Life mounting on death, the eager flame flashes.
And upward untiring doth climb and aspire—
Man's emblem and nature's—the winter night's fire.

John Charles McNeill.

SUNFLOWERS.

"Kansas: Where we've torn the shackles from the farmer's leg," sings Walt Mason. How did they shackle a one-legged man?

The peach crop has been ruined—for the first time, this year. Just before the season opens, next summer, it will be killed again.

"The Kansas Natural Quits," exclaims the esteemed Coffeyville Journal. Our impression was that the company had not even started.

Still, if you insist upon attending to other persons' business you can't expect your own to prosper. That's so old it's a shame to print it, but it's true.

Stenographers in Washington struck, a few days ago, for higher pay, and, incidentally, got it. Perhaps they were the ones that could spell.

Will we be forgiven for intimating that Mr. Roosevelt's attitude, just now, reminds us of the lovable character of Dickens, one Barkis, who was "willin'?"

A man in Lawrence intends to eat 228 rabbits in 228 meals. Because of its setting we shall deny ourselves the pleasure of commenting upon this item. But we have an opinion.

The magazines are getting even with Postmaster General Hitchcock by consolidating their publications, or by going out of business. And that's what they said would happen.

How many of the present generation know, or ever heard of, Dr. Mary Walker, whose picture is getting into print again, for some queer reason? What memories her name revives!

According to the ruling of Auditor Davis, the only way a state employee can get a decent meal on a train is to eat two for \$1.50, at once, or eat for a dollar and starve until he gets back home.

A burglar who broke into a hardware store at Garfield, Kan., was captured by members of the Anti-Horse Thief Association. This is an organization that is many things to all its friends in many communities.

Two extremely interesting subjects—for winter treatment—are to be discussed, Monday night, in the Science Club: "Heat as an Insecticide," and "Heating the Orchard." "Put Up Your Own Ice" will be kept for a summer meeting.

Brother Faxon, of the Garden City Telegram, simply must get some "Vs." The reprehensible habit of referring to the region that was home to us, in the springtime of life, as "The alley of content," is distinctly painful. We do hope this will be remedied.

Well, anyway, Bryan did not, at any time during those dark and gloomy days and nights of the Third Defeat, so far lose his head as to declare himself forever out of the race. It was Mrs. Bryan who said that, with her consent, he never would run again.

With the Garden City Telegram coming out only twice a week in the future, that part of Kansas will hereafter be known as the Valley of Discontent. It can't get away from it. The cheery optimism of R. H. Faxon deserved daily expression. It was too bad he had to retrench. We hope Brother Faxon knows he can get enough stuff right in this little old office to fill his whole paper—absolutely free, gratis, and also for nothing. Cheer up.

HEDGE STOPS THE WIND.

AND BEIDES IT GROWS THE BEST KIND OF POSTS.

The Osage Orange is the Kind Most Suitable for a Windbreak—If Kept Trimmed It is an Ideal Fence. Try It.

A hedge fence is all right. It is just a matter of difference of opinion as to whether a hedge is considered practicable or not. The Osage orange is the one generally referred to. The locusts are no longer classed as hedges. There are other hedges, though, besides the Osage orange. The mulberry is an ideal hedge for certain purposes. The evergreens, while not true hedges, are used for that purpose as windbreaks.

The Osage orange makes an ideal field fence, provided it is kept trimmed. When boxed trimmed it makes a pretty fence, and is ornamental to the highway. It is the only kind of a hedge recommended for such a purpose, according to C. A. Scott, state forester at the Kansas Agricultural College. An untrimmed hedge has an enormous total evaporating surface, and saps water from the ground proportionally. That is the reason crops suffer that are grown next to a tall hedge. Where hedges have been grubbed out, it was found that they had enriched the border land of the field.

GOOD FOR POSTS.

It is a common practice to grow a hedge for the posts it will produce. It is thus made to serve a double purpose—as a fence, and as a financial return. Such a plan works all right for the landlord, but meets with serious objection by the road authorities on account of snow drifting in so badly during the winter. Where it is desirable to grow hedge for posts it should be planted in a plot set aside for the purpose. Such a plot may also answer the purpose of a windbreak on the north, west, or south side of an orchard. It would not be practicable to string out a hedge plot so as to make a windbreak on two or more sides of an orchard, for reasons which will be given later on.

HOW TO PLANT.

When hedge is set out as a fence the ground should be plowed eight feet wide on each side of the hedge row. An especially deep furrow should be left, within which the plants are to be set. The plants should be placed in one side of the furrow about 10 inches apart. They should be covered with dirt by plowing a furrow on them from the opposite side. When planted in a plot, the plants should be placed about 20 inches apart, and the hedge rows should be 12 to 15 feet apart. After the first few years of cultivation such a plot usually comes up to shrubbery, weeds, and sprouts between the hedge rows. Such a condition would be extremely disastrous to an orchard if bordering on more than one side. In pot-smudging of orchards it has not been found necessary to have a windbreak on the east side. And for the other two or three sides, either the mulberry or the cedar hedge may be used to good advantage.

ALUMNI NOTES.

Bessie Bourne, '02, and L. H. Cool were married at Delphos, Kan., December 27. Miss Bourne has been teaching since finishing her course here. Mr. Cool is a farmer near Glasgow.

Dr. E. A. Donovan, class of '94, writes from Prior, Okla., that all is well with him. He asks the horticultural department for information concerning an orchard and a vineyard that he is planning to set out.

Announcements have been received of the marriage of Laurenz Greene, class of 1907, and Miss Gertrude Mereness, of Sac City, Iowa. Mr. Greene is doing experimental work in the Iowa Agricultural College, Ames, Iowa.

F. W. Haselwood, '01, and Mrs. Maud (Zimmerman) Haselwood, '02, of Berkeley, Cal., were visitors at the college this week. Mr. Haselwood is

now in the state service as an engineer for the State Conservation Commission, investigating, with particular regard to water power, what has been developed and what can be developed.

H. S. Bourne, of the class of 1901, visited the college last week with a younger brother, who is beginning the college course. Mr. Bourne is now engaged in the implement and farm machinery business at Delphos. He says that in the summer he operates a thrashing machine as recreation. In 1911 he thrashed 35,000 bushels of wheat and 2500 bushels of alfalfa seed. As the cost of thrashing alfalfa seed is \$1 a bushel, this is worth considering. He thrashed 29 bushels from one two-acre patch, he said, and from 18 acres had an average of 10 bushels an acre. In 12 hours he thrashed 183 bushels, which is considered some record for alfalfa seed.

A CLUB PRACTICES COOKERY.

Farm Women at Richmond in a Society to Learn Practicable Things.

A club of progressive farm women at Richmond, Kan., known as the Women's Auxiliary, decidedly is alive to the possibilities of such an organization. At a recent meeting of the club three members gave a demonstration of serving a luncheon by using fireless cookers, paper bags, and trying several new recipes. In other ways this meeting was made unusually interesting. The agricultural college is endeavoring to organize clubs such as this one wherever there is a farmers' institute. Occasionally the college sends speakers to meet with the women's clubs. It is eager to give them assistance whenever possible. Read this from a report of this particular meeting:

"The Women's Auxiliary met with Mrs. Clarence Sturdivant for their December meeting. Roll call was responded to by each member explaining and demonstrating some little contrivance that had helped in the housework. These responses ranged from a home-made clothes sprinkler to a self-heating flatiron.

"Mrs. D. B. Snyder presented a report of the Congress of Farm Women which was held in Colorado Springs in October. A short musical and literary program was a pleasing diversion for the afternoon. The Auxiliary trio, consisting of Mrs. A. R. Harshberger, Mrs. Clarence Sturdivant, and Mrs. Edwin Hill, sang a home-made song, the words of which told of their experiments with paperbag cookery. It was great."

"Mrs. V. A. Brown read an article concerning the community laundry which is being introduced in Kansas by Miss Frances Brown, of the agricultural college.

"The club was then released from order and a luncheon was served, different articles on the menu being demonstrated between courses. First course: Bread and butter sandwiches; roast beef, cooked in fireless cooker, demonstrated by Mrs. V. A. Brown with a three-hole cooker. Roast chicken, cooked in a paper bag, demonstrated by Mrs. J. A. Hargrave. Baked apples, cooked in a paper bag, demonstrated by Mrs. F. B. Patten. Second course: Fruit and vegetable salad; black pudding with cream sauce, demonstrated by Mrs. J. H. Edwards. Third course: Two kinds of cake and cocoa, demonstrated by Mrs. V. A. Brown.

"Forty women attended the meeting."

Charcoal for Cistern Water.

After getting pure water into your cistern the next thing is to keep it pure. One good way to do it is to allow air to circulate in the cistern.

Another is to put three to six inches of freshly burned charcoal in the cistern. If the charcoal will not stay at the bottom or is sucked up by the pump, put some gravel on top of the charcoal. When the cistern is cleaned all that need be done is to remove the charcoal and gravel, either placing it in the sun to dry and then returning it, or putting in new charcoal and gravel.

OH, THOSE PAPER BAGS!

MANHATTAN SOCIETY IS DIVIDED ON THE NEW COOKERY.

Though the Adherents Adhere and the Opposers Oppose, It's Simply a Choice of Washing Greasy Pans or Greasy Arms, One Cook Says.

The women of Manhattan are much interested in paper-bag cookery. The subject has become the favorite topic of conversation.

No woman can consider herself among the socially elect unless she has tried M. Soyer's method of cookery and has one drawer of her kitchen cabinet stocked with paper bags. The more successful she is with her cookery the higher her standing, of course, but in Manhattan it is better that your bags should burst than that you never bag at all.

Martha McCullough Williams started it. Her articles on paper-bag cookery in the newspapers seemed to cast a spell over her readers, men and women alike. Just to read of her wonderful broiled chicken, "cutlets a la Paysanne," "stuffed tomatoes Milanaise," or custard pudding with peach sauce, made one's mouth water. Each woman, as she read, saw her plainest meals transformed into repasts such as epicures dream of, and, oh joy of joys, pots, kettles, and dishpans faded away at one wave of a magic bag.

THEY ALL TRIED THEM.

All sorts and conditions of housewives tried the bags. And they tried all sorts of dishes, too: baked apples, veal loaf, puddings, pies, omelets, and even croquettes and boarding-house hash.

Every one began experiments with a chicken, probably because the toughest, skinniest fowl was warranted to emerge from its bag plump, tender, brown, and juicy, with a wonderful flavor never produced by old-fashioned methods.

Perhaps the bags did all that was expected of them, but the boarders at one club did not notice any difference in their Sunday chicken until they were told it had been cooked by M. Soyer's new method. The Sherlock Holmes of the club then remarked he had suspected as much when he noticed the drumsticks tasted baggy at the knees; but he was promptly and properly squelched.

Greasing the bags is said to be the worst feature of the new cookery. Often the cook gets more grease on herself or the stove or the floor and the walls—and the baby—than in the bag, and there are women so unprogressive as to insist that it is more trouble to wash greasy arms and aprons than to wash one roasting pan. These women also say the loss of gravy is not made up for by the satisfaction of having one's roast garnished with bits of charred paper.

AND THE SAVING?

The money saved in fuel, they further assert, is all paid out for bags. Bags cost 25 cents for a package of thirty, and often several burst in the oven before the food is cooked. One woman used six bags, and much language, and then, in despair, finished baking her chicken in a pan. She is offering to give her bags away now as premiums.

Discussions as to the merits of the new cookery are heard on all sides, but the burning question—for burning it is—is still undecided. The most enthusiastic users of the bags declare it is the most wonderful discovery of the age, but in most Manhattan kitchens the "cook lady" sings as she rattles her pots and pans, "It's the good old way of cooking and it's good enough for me."

THE USE OF ROAD OIL GROWS.

Better Treatment of Highways Gives a New Market—The Figures.

The United States produced 260,080 tons of asphaltic material in 1910, whereas only 228,655 tons were produced in the previous year. The greatest increase was in the production of asphaltic road oil, which rose from 128,861 tons in 1909 to 159,424 short tons in 1910. This product was

worth \$2,207,937, as against \$1,558,463 in 1909, which shows an advance in price as well as quantity, indicating active demand.

Evidently the new sprinkling or "penetration" method of applying asphalt to roads is permanently established, but there are asphalts and asphalts, as is well indicated by the names with which the various sorts are labeled, such as tabbyite, wiedgerite, aeonite, grahamite, gilsonite, and a host of other names, which show the different varieties. There are ways of identifying these varieties, and the report just issued contains a table showing the chief characteristics of each kind. The great problem for the roadmaker, now that the use of asphalt is approved, is to select the kind of asphalt which is most desirable as to price and efficiency.

THE INFLUENCE OF NEWSPAPERS.

Henry J. Haskell, of The Star, Discusses an Important Influence in Civilization.

The influence of newspapers in shaping the progress of nations, and their contributions to the common-sense literature of advancement, were discussed for an hour, Tuesday morning, by Henry J. Haskell, editor in chief of *The Kansas City Star*, in an address on "Newspapers and the Forward Movement" to two thousand students in the morning assembly at the Kansas Agricultural College. One reason for the difference between China and the United States, Mr. Haskell said, as an illustration, was the lack of this element which newspapers contribute toward civilization, that broader outlook which makes modern civilization what it is to-day.

Mr. Haskell addressed the students of industrial journalism in Kedzie Hall at 11 o'clock. "We are beginning to think about the farmer and his problems in a new way," Mr. Haskell said. "To my notion, one of the great developments, one of the things about which we are to hear much in the next few years, is the protection of the farmer. I don't mean tariff protection. I mean protection in the broader sense; that is, showing more respect for, and elevating the great industry of farming.

"Just at this moment when this movement—larger protection for the farmer—is beginning, students in agricultural or industrial journalism have a great opportunity. A noted essayist wrote, a few years ago, an essay on 'History Should Be Readable.' That essay title might well be applied to the journalism of to-day and to the farm journalism and to the industrial journalism which you are here studying. There is no use in printing something which people will not read. Newspapers are printed for the people to read. As a rule, they do not enjoy reading statistics. They like to read human-interest articles.

"The successful paper striving to fill the needs of the people makes its reading matter readable. A newspaper must win out on its merits. A college professor can get his audience in a room and they that make up the audience must listen whether it be interesting or not. You can't do that in a newspaper. This is the reason it is particularly essential that while you are studying industrial journalism you should put emphasis on this side of things. The reporter who can do this is the real prize of journalism, because on his work depends, in a large measure, the success of the newspaper. There is a constant and growing demand for information on the subject of agriculture and the industries, for the newspapers are seeing, as everybody is seeing, that the farmers constitute the majority upon whom the attention of the world is to be centered. An enormously important literature is to be developed in this department of work. You are just at the beginning of this era of development and you ought to be congratulated on the hand you are to have in its development."

Mr. Haskell, with President Waters, was entertained at luncheon at the home of Charles Dillon.

Don't lend your paper to your neighbor. Let him subscribe.

THE SOIL WAS STUDIED.

EXPERTS DETERMINE WHAT THE LAND IN TWO COUNTIES NEEDS.

Soil Specialists from the Kansas Agricultural College and Washington Made the Tests—An Illustrated Bulletin Will Be Published.

A soil survey recently was made of Reno and Shawnee counties. A soil expert from the Kansas Agricultural College and another from the U. S. Department of Agriculture went over every section in these counties. They bored holes in the ground and found what type of soil was there and how deep this type was. They kept notes on their work. Then they made maps of many colors. These colors represent the different kinds of soil that were found. The colors also show what kind of soil may be found on any particular farm in these counties, which has been surveyed by these soil experts. All of these colors are numbered, and an explanation of every number will be published in a bulletin later. One of the colored maps will be enclosed in every bulletin. By looking at the bulletin the owner of a farm can see what sort of soil he has, and what kind his neighbor, or someone who has a farm for sale, may have.

By referring to the explanation in the bulletin the farmer can determine a great deal about the productiveness of his farm. He can see, also, what crops would be best adapted to particular portions of it.

But there is still another benefit of the soil survey. A chemist from the Kansas Agricultural College will visit the places where the different types of soil are found and take samples of them. He will make an analysis of these samples and thus determine the amount of plant food present in the soil. It will be possible to tell, then, what kind of fertilizers are needed.

In the soil survey the land that needs draining also is shown. The productiveness of much land in the state may be improved by draining. The different types of soil will be tested by the Kansas Agricultural College by growing different crops on these soils. These plot tests will show just what crops are best for every farm. In other words, it will put the experiment station in touch with the soils on every man's farm.

Similar maps of other counties will be made later, as fast as appropriations are made. Reno and Shawnee counties were chosen first because of their many types of soils.

SHE IS TEACHING INDIANS.

Miss Lulu Case Instructs in Buttermaking and Cooking at Haskell.

The Indian students at Haskell Institute, Lawrence, are being taught cooking and buttermaking by a girl who was graduated from the Kansas Agricultural College last spring. Miss Lulu Case, whose home is in Manhattan, is the young woman. She began work in her new position last week.

Miss Case took a four-year course in domestic science at the agricultural college. Since her graduation last June she has been taking special work in cooking, sewing, and pedagogy. Miss Case also took a course in the school of industrial journalism, where she learned to write interestingly on subjects relating to her work. For a young writer, Miss Case showed unusual ability in this line. Her stories of housekeeping, and women's work generally, were printed not only in Kansas but in other states.

Next—

An Old-Time Graduate Finds Comfort in the College Paper.

To The Industrialist:

I wish, in a sincere spirit of admiration, to congratulate THE INDUSTRIALIST of January 6. I wouldn't take time to write this card if it were not more a task to refrain from doing so. For all-around interest, information, and utility the issue is "lulu" and "crackerjack" in combination.

H. C. RUSHMORE, '79.
Kansas City, Kan.

WHO'LL GET THE POTASH?

THIS COUNTRY HAS IT ONLY IN UNAVAILABLE QUANTITIES.

Until Chemists Discover a Process, the United States Will Continue to Import Potash from Germany at Eleven Million Dollars a Year.

A supply of available potash in the soil is essential for plant growth. The supply is very low on many of the farms of the United States and an increasing amount is purchased in the form of commercial fertilizers every year. Last year 1 billion, 800 million pounds of potash salts, valued at 11½ million dollars were imported from Germany. The Germans have a monopoly of the world's potash supply.

Before 1858 the only important source of potash was wood ashes. In that year a well driller bored a well 1000 feet deep near Stassfurt, Germany, and found a deposit of salt and potash compounds. The commercial marketing of the fertilizer began three years later and the industry has grown until about one and one-half million tons are mined every year. The Germans collect an export tax, and coupled with the large profit that they make on the mining operations makes the potash very expensive. Forty-eight per cent potassium sulphate costs \$45.25 a short ton, f.o.b. Stassfurt.

SOME OLD DEPOSITS.

The German deposits were formed when the great inland sea dried up about 13,000 years ago. The potash, with other compounds, was in solution in the water, and when the water was evaporated they were all left behind in layers. On top of the deposits are layers of red sandstone and limestone for the first 800 feet.

Many of the common rocks in the United States contain considerable amounts of potash. Most of the granites contain four or five per cent of the fertilizer and some of them even more. Some of the feldspars contain as much as ten per cent or more. All of the rocks in the Leucite Hills, Wyoming, contain from 9 to 11 per cent potash. Stone Mountain in Georgia, a single granite knob, contains 7,543,750.950 cubic feet of rock, and the analysis shows that this rock contains 5.11 per cent of potash. Therefore, there are 32,362,692 short tons of potash in the hill, or enough to last the United States 100 years on the basis of present consumption. But all of this fertilizer is in a form that is not readily available for the use of plants. Chemists must find a method by which this stored plant food may be made available. Congress appropriated \$12,500 to the Bureau of Soils and \$20,000 to the Geological Survey, last year, to investigate the potash supply and problems of the country.

IN CALIFORNIA, TOO.

It is very probable that large deposits of soluble potash salts, like those of the German fields, may be found in the western states. Small deposits already have been found in Mono and Owens lakes in California, and the arrangement of the layers in some of the salt deposits leads to the belief that some large mines may be opened up. These deposits will not be found outcropping because they are soluble. A great number of borings will be made in an effort to find these beds. If deposits are found it will mean that the farmers will be freed from paying tribute to the German operators.

BUGS, AND ORCHARD HEATERS.

G. A. Dean and Albert Dickens Will Discuss These Subjects Monday Evening.

Have you ever found a bug in a fresh, appetizing biscuit? Want to know how it got there? It was in the flour. Ever since men began to grind grain in large quantities and store the product for a considerable time, many species of insects have fed upon it, and whenever it is stored for a considerable period these insects are likely to be found. The problem of driving the enormous number of bugs out of large mills long has been difficult and expensive. Recently an inexpensive and practicable method has been developed by

the department of entomology. Prof. George Dean, of that department, will describe the development of this method before the Science Club next Monday evening.

Five million bearing apple trees in Kansas yield less than one-half bushel apiece. The reason for this is lack of proper care, one of the largest factors of which is protection from frost. The department of horticulture has carried on some extensive studies of orchard heating, and Prof. Albert Dickens will describe this work at the next meeting of the Science Club. The club will meet to hear these lectures January 15, in room 27 of the Physical Science building, at 7:30 p.m. Everyone interested is cordially invited to attend.

COWPEAS MAKE HUMUS.

When Plowed Under, This Crop Also Furnishes Nitrogen as Plant Food.

For green manuring purposes, no plant is better than cowpeas, crop experts at the Kansas Agricultural College say. One year of this crop will improve the soil for ten years. They are deep-rooted and can, therefore, use and make available plant food which

Injustices.

One per cent of the population of the United States controls 54.8 per cent of the entire wealth of the country, and 11.9 per cent of the population, comprising the middle classes, controls 32.2 per cent, thus leaving but 13 per cent of the wealth of the country for the remaining 87 per cent of the population. Fifty per cent of the population of this country of unparalleled prosperity has practically nothing and perpetually stands but a few days removed from actual want and starvation.

Nearly 2 million children under fifteen years are engaged in manual labor unsuited to childhood strength.—*The Rev. Orrin W. Auman.*

other crops are unable to get. Nitrogen is the fertilizing element usually lacking in the soil. Cowpeas take this element from the air and make it available.

Cowpeas grow best in warm climates, but many varieties will grow in cooler regions. The Whippoorwill, Wonderful, Clay, and Red Ripper varieties are well adapted for green manure.

When corn is to be planted on wheat ground, cowpeas should be sown in the stubble immediately after the grain is harvested. One and one-half bushels to the acre, sown broadcast or drilled in with an ordinary grain drill, will give the best results. If a drill is used, it should follow the binder between the dropped bundles and the standing grain. Where the field is trashy or weedy and can be cleared of the grain before July 1, it should be cleared and disked. In no case should the planting be delayed long after this date, but disked will make the sowing of the peas an easier matter. A thoroughly warm seed bed is necessary for success with this crop.

Cowpeas, seeded in July and grown through August and a part of September, may be plowed under late in September or early in October without any danger to the succeeding crop or to the soil. On light soils a part of the crop should be removed. On heavy clay soils plowing under the whole crop is best. The ground should then lie fallow until spring. Where it is possible the peas may be pastured before being turned under with little loss in fertilizing value and a considerable additional gain in feed for farm animals.

The expense of growing the peas will be about \$4 an acre. The ground will raise almost enough more corn the next year to pay this expense, and then there will be a diminishing gain for a period of nine years longer.

It isn't cold; it's just the wind.

LAND WASTED IN ROADS.

KANSAS HIGHWAYS ARE TOO WIDE,
W. S. GEARHART SAYS.

By Reducing the Width from 60 to 40 Feet
Thousands of Acres Worth Millions Could be Saved in the State.

If, by narrowing the public roadways from 66 to 40 feet, Iowa can give back to the farmers 300,000 acres of agricultural land valued at 30 million dollars, why couldn't Kansas, with 60-foot roadways, save nearly as much? Governor Carroll, of Iowa, proposes to make that saving by reducing all highways in that state to a uniform 40 feet.

A big saving for Kansas could be made in the same way, says W. S. Gearhart, state highway engineer at the Kansas Agricultural College. A 40-foot road is wide enough for traffic anywhere in the state, he says. Any Kansas road, Mr. Gearhart says, properly graded and maintained, which is 30 feet wide between the centers of the ditches on either side of the road, will accommodate any kind of traffic so far as width is concerned. But the ditches should be well formed, with the bottom level not more than 24 to 30 inches below the crown of the finished road.

FOR WEEDS AND BRUSH.

"A width greater than is necessary to accommodate the traffic," said Mr. Gearhart, yesterday, "only gives place for weeds and brush to grow. It furnishes, also, an opportunity for inexperienced road officials to waste public funds by trying to grade up and maintain roads 35 to 60 feet wide between the centers of the ditches.

"On roads having little traffic the width between the centers of the ditches may be reduced to 20 or 25 feet. This should be done, at least, until more funds are available. Roads 20 to 30 feet wide are much cheaper to grade and drag and maintain, when properly crowned, than wider ones. Any excess funds would better be spent in reducing grades and properly surfacing rather than making the road wider. It practically is impossible, with the funds that most counties have, to construct and maintain roads 35 to 60 feet wide.

SOME GOOD EXAMPLES.

"Missouri's Cross-State Highway from St. Louis to Kansas City and the Santa Fé Trail from Kansas City to Pueblo are graded 30 feet between the ditches, and no one objects to the width of them. The Meridian Road, the Sunflower Trail, the Golden Belt Road, and other cross-state highways in Kansas are to be constructed the same width. On all of these roads it has been recommended that all culverts be constructed with a clear width of 20 to 24 feet."

NOT SO MUCH IRON IN 1911.

Estimated Production, According to U. S. Geological Survey, 24 Per Cent Decrease.

Preliminary estimates of iron ore sold in 1911 were sent to the Geological Survey by 26 of the largest iron-mining companies in the United States at the close of the year. The combined output of these companies represents more than 80 per cent of the total production of the United States. From these returns it is estimated by E. F. Burchard, of the survey, that the total quantity of iron ore marketed in the United States in 1911, not including stocks left at the mines, was between 43 million and 46 million long tons.

This quantity represents a decrease of 22 to 24 per cent of the sales for 1910, which aggregated 56,889,734 long tons.

This for Your Poultry.

The college of agriculture, Ohio State University, is recommending a lime powder which, it is said, poultrymen will find effective in ridding their fowls of parasites. Directions for making the powder are: Put 2½ pounds of plaster of Paris into a pan. Then mix ¼ pint gasoline and ½ pint cresol. Stir the plaster of Paris while adding the liquid. When ready the mixture should be rather crumbly. After drying it should be sifted, when it will be ready to use.

WINTER - TIME -

Reading Time

For the Family on the Farm.

Give father and mother, and the boys and girls, something to read in which they are interested and your own fortunes will prosper more.

They have the time, now. They'll be busy in the summer with their crops.

Do You Understand Publicity Like This?

It is not advertising. Don't make that mistake, Mr. Editor. It is taking information to the persons who need it most. And that is exactly what newspapers are for, isn't it? It is taking facts to the farm that the farmer and his family cannot get in college because they have no time to go there.

We Are Sure of Our Facts.

Every article sent from Kedzie Hall to the newspapers of the United States, either for exclusive use or in the "Plate Service," is authenticated before it leaves the office. That makes the farm articles from the Kansas Agricultural College invaluable. Write us about them.

Do You Read THE KANSAS INDUSTRIALIST?

If you are a graduate of the college, a newspaper man with a liking for "Time Copy," a state officer, or the head of a farmers' institute, and are not getting this little paper you are missing some good things about Kansas agriculture. If you do not belong to any of those classes you can get the paper by subscribing. Don't forget that.

It is quoted from New York to San Francisco. It is regularly clipped by more than 1100 newspapers and 110 farm publications. It is read in eighteen countries. And it costs fifty cents. : : : : : : :

THE
Kansas Industrialist

THE KANSAS INDUSTRIALIST

Volume 38

Kansas State Agricultural College, Manhattan, Saturday, January 20, 1912

Number 13

ORDER REDCEDARS NOW.

THE BEST TREE FOR WESTERN KANSAS, AND HOW TO PLANT IT.

Charles A. Scott, State Forester, has 65,000 Two-Year-Olds in the College Reservation—Fine Soil Conditions Likely Next Spring.

The farmer in western Kansas who fails to plant trees next spring will miss a fine opportunity. The snow, unusually heavy this winter, will put the ground in excellent condition. If the spring rains are normal the situation is certain to be ideal. "It will be the best possible time to plant wind-breaks and shelterbelts," said Charles A. Scott, state forester at the Kansas Agricultural College, this morning. "They should have these trees, too, to protect their farm buildings and beautify their surroundings."

FOR WESTERN KANSAS.

The red cedar is particularly suited to western Kansas. It is a native, it is the hardiest of evergreens, and its dense foliage makes it an excellent tree for protection purposes. Grown here, its cost is small. The forester has 65,000 once-transplanted, two-year-old red cedar trees, now, which farmers may have for exactly what they cost the state.

"A very satisfactory arrangement of the trees in a shelterbelt," said Mr. Scott, "is to plant two rows eight feet apart. The trees should be set eight feet apart in the row, the trees in one row setting opposite the space between the trees in the adjacent row. In a very few years the trees will reach sufficient size to fill all the space between them, and thus form a solid wall of foliage from the ground to the topmost branch.

"In addition to the cedar being a hardy tree, it is a long-lived tree. Once established, it grows with great vigor, notwithstanding drouth and cold. It is injured less by hail than any other tree.

ANY KIND OF SOIL.

"The red cedar can be grown on any farm in western Kansas. It is not particular in its demands for any kind of soil, but will grow in a hard, shaly soil almost as readily as in a loam soil, and it makes a very satisfactory growth in sandy soil.

"In handling cedars, one point should be kept in mind: The roots must be protected from exposure to the air. A timely piece of advice when planting cedars is to be sure the roots are always damp and the tops absolutely dry. These conditions can best be obtained by puddling the roots as soon as the trees are received, and by keeping them protected until the trees are planted. The tops must never be wet while they are packed or bundled. A very little moisture causes the leaves to mildew, and this is sure to result fatally."

TIME TO CLEAN HARNESS.

With Care You Can Make It Last Twice as Long.

You can make your harness last twice as long by giving it proper care, and it takes but a very little time to do it. "A good set of double harness," says C. F. Chase, assistant in farm mechanics at the Kansas Agricultural College, "if properly cared for, should last the working lifetime of a horse.

"All work harness should be thoroughly cleaned, washed and oiled once a year. Winter is the best time to do this when the work on the farm is not so rushing. Every farmer should have a simple repair outfit, such as a leather punch, rivets, and a sewing outfit. If your harness begins ripping, take a few minutes and make the necessary repairs. It will often save you a break-down in the rush season, and may eliminate the necessity of buying a new set of harness."

This is a good way to clean harness: Hang it at a convenient height and then go over it with a brush to get all the dust and caked dirt in the stitching, loops, and around the buckles. This should be followed with a soft cloth.

In washing the harness a tub should be used filled with tepid water. The water should be soapy. About half a pound of white Castile soap will make the water ready for washing.

Wash the harness thoroughly, piece by piece, except, of course, the padded parts, and then rinse in several tepid waters. Hang the harness up to dry in a warm room. After the harness is thoroughly dry, take some neat's-foot

AN ACRE FROM 12 EARS.

BUT ONE INFERTILE EAR OF CORN MEANS A BIG LOSS.

Don't Let the Seed Freeze This Winter, as it Will Weaken the Germ and That Makes a Weak Plant.

The grains from twelve ears of corn will plant an acre. If one of these twelve ears is not fertile there will be a loss of three to five bushels in the yield. As most corn growers select their seed in a haphazard way, it is a fair assertion to say that the farmers of this country lose about 10 million

should be stored in a dry room where it may be hung or spread out so as to dry thoroughly.

Any time during the winter the seed ears may be selected. This is done by picking out an ear as nearly like the type desired as it is possible to get and then comparing the others with this one until a sufficient number has been selected. Then the vitality of the seed should be tested by taking a few grains from each ear and germinating them in a place where there is moisture, heat, air, and light. At least 95 per cent of the kernels should germinate in five days. This germination test is necessary because it is impossible to tell by the looks of a

WATCH THE LUNCH BOX.

CHILDREN NEED WHOLESOME FOOD AT NOON—NOT PIE AND CAKE.

Make the Luncheon Attractive by Wrapping the Food in Paraffin Paper—One Kind of a Pail Keeps Luncheons Warm.

Are your boys and girls getting the right kind of school luncheons this cold weather? Little minds cannot learn lessons readily if little bodies are not properly nourished.

Too many persons seem to think it makes no difference what is put into a schoolboy's dinner pail. Thick slices of bread with hard, lumpy butter, greasy pork, doughnuts, and pie are thrown into the pail together anyway they may happen to fit in best. Dinner pails are left in the unheated schoolhouse hall until noon, and the luncheons are cold—sometimes half frozen—and almost indigestible. Is it any wonder, then, that your boy or girl comes home from school with a headache?

HAVE THE BOX CLEAN.

The first essential for school luncheons is daintiness. Cold dinners are none too tempting at best, and great pains must be taken if they are to be made appetizing. Dinner pails or boxes should be scrupulously clean, and lined with white paraffin paper. Wrap each article of food separately in paraffin paper. This can be bought in large rolls or in packages and is not expensive. Plain paper napkins renewed every day are better than a linen napkin used several successive days, and the paper ones save laundry work.

Cut bread in thin slices and warm the butter so that it will spread evenly. Do not pack warm food into lunch boxes. It will be steamy and soggy by noon.

See that the food is simple, nourishing, and easily digestible. Do not put in much meat. If children do not care for plain, hard-cooked eggs, try mashing yolk and white together with a little salt and melted butter and putting the mixture in sandwiches. Grated cheese sprinkled on buttered bread makes simple sandwiches children will enjoy.

SWEET SANDWICHES.

Do not put into luncheons bread spread with sticky jelly or syrup. Make sweet sandwiches of raisins and walnuts ground together and moistened with a little water and lemon juice. Dates or figs may be used instead of raisins.

For desserts, do not use pie and rich cake. Simple cake or cookies and apples or some other fruit are better. Plain rice or tapioca pudding placed in a covered glass, with a bottle of cream, will prove acceptable to most children.

Dinner pails made on the principle of the fireless cooker may be obtained in several sizes. Hot food placed in these pails at breakfast time keeps warm till noon. Some have two compartments, one nesting into the other, so that two kinds of food may be carried.

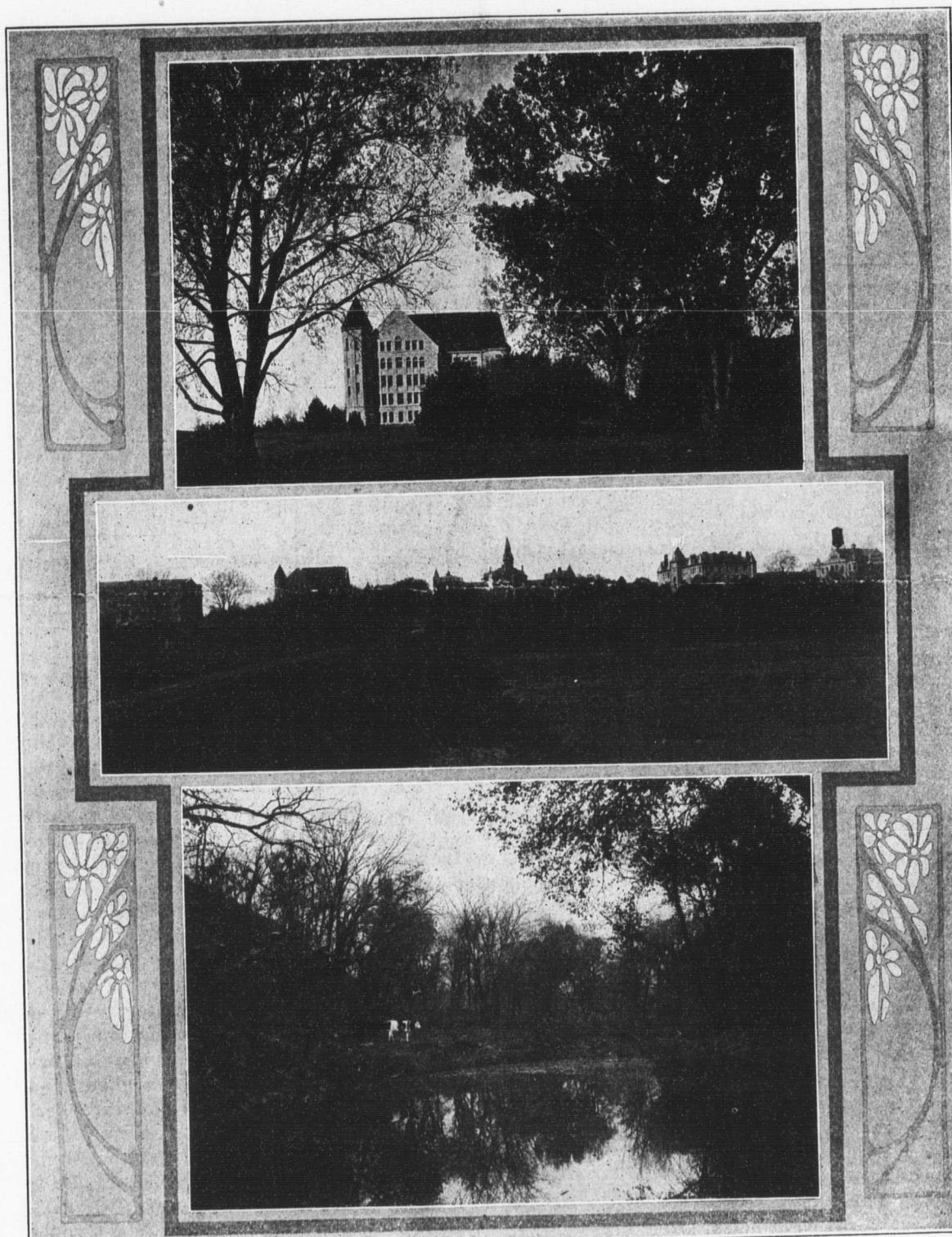
Such a pail may be filled with buttered rice, savory Irish stew, or a nourishing cream soup. Of course the pails are expensive, but the satisfaction of warm, wholesome noon meals in this cold weather is worth the cost.

Prof. Willard at Lawrence.

Professor Willard presented a paper Wednesday night, January 17, before the Chemical Engineering Society of the University of Kansas on "The Service of Chemistry to Agriculture."

Not one teacher was married, in Sedgwick county, in the holiday season, *The Beacon* says. It was a bit too soon after the revival, Henry.

A CONTRAST WITH WINTER DAYS.



"The shadows play along the wheat,
The river sparkles to the sea;"

oil and thoroughly work it into the harness, giving special attention to the hard places and points of contact. This makes the harness as soft and pliable as it was when new.

Special attention should always be given to the collars. These must be looked over and kept clean at all times or sores will result on the horses' necks.

PROF. LIVINGOOD IS TO COME.

The Summer School is to Have an English Teacher from Indiana.

Prof. W. W. Livingood, head of the department of English, of the Indianapolis public schools, has accepted an offer to teach English next summer in the summer school of the Kansas Agricultural College. The English work in the Indianapolis schools is accorded first place by critics everywhere.

dollars every year because of laxity in the selection and care of seed corn.

Many a farmer stores his seed corn in an open crib during the winter and then wonders why it will not all grow. The corn kernel, when first husked, is about twenty per cent water. Unless the grain is thoroughly dry, freezing will destroy its vitality. A weak germ produces a weak plant, and weak plants produce a small yield. It has been proved that the freezing of damp seed will decrease the yield as much as 16 bushels an acre.

The best way to get the best seed is to fasten a box on the wagon which you use at husking time and put all the large, well-developed ears, which grow at the proper height on vigorous, leafy stalks and hang downward, into this box. Never take any seed corn from the outside rows of a field where it may have been fertilized from another field. The corn from the box

kernel whether it is dead or not. The ears from which grains that failed to germinate were taken may be used for feed.

The size of the grains should be uniform, so that the number dropped by the planter will be nearly the same in every hill. The small grains from the tips of the ears and the large grains from the butts should be removed, and all the rotten and broken kernels should be picked out.

This winter has been especially hard on seed corn. Too much care cannot be taken to insure a good crop next fall. The three essentials are good seed, good soil, and good tillage. Select your seed in the way just explained; rotate cowpeas or some other green-manuring crop with your corn, cultivate it at the proper time, and the extra dollars you will receive will more than compensate for the extra labor involved.

THE KANSAS INDUSTRIALIST

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PRES. H. J. WATERS Editor-in-chief
PROF. C. J. DILLON Managing Editor
DR. J. D. WALTERS Local Editor

Except for contributions from officers of the college or members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism, under the direction of Prof. Charles Dillon.

The typesetting and other mechanical work is by students in the school of printing. Both these departments are in Kedzie Hall.

Newspapers and other publications are invited to use the contents of the paper freely without credit.

The increasing demand for THE KANSAS INDUSTRIALIST makes it necessary to insist upon the payment of the regular subscription price, 50 cents a year, invariably in advance. No commission is paid any one for subscriptions, and no advertisements are accepted. The paper is sent free only to the alumni, to officers of the state, and members of the legislature. This rule will not be violated.

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SATURDAY, JANUARY 20, 1912.

"WHY I CAME TO COLLEGE."

The reasons that induce a boy or girl to enter college cannot fail to be interesting. In nearly every instance, when this question is put to a student it brings out something real, something worth while, something mighty close to human nature. Of course, occasionally, one meets a dummy; they are to be encountered everywhere, but, to judge by the writing of more than nine-tenths of the students in the department of industrial journalism, the efforts of the people in supporting an agricultural college are being well repaid, well rewarded—or will be rewarded in the future by good service. These first journeys in journalism sometimes disclose queer ambitions, but in most cases they show that the children of Kansas are a level-headed lot, determined to equip themselves for big duties so that it may not be said of the state's people that "their incompetence is appalling," as a noted writer once said of men and women in general.

One class in the department of industrial journalism is made up of ten young women and two young men. They are juniors or seniors ranging in age from 18 to 25. "I wanted to be a man among men," said one of the young men, "and not a common day laborer." Notice that? Remember the student who went from high school to earn a living and found he was "just a common laborer—didn't know anything?" That student knows there is no competition between skilled and unskilled labor. He knows that each takes its place, naturally, without any contest. So he came to college.

Here are parts of a few of the stories turned in by the class. They show a mental condition that certainly is encouraging:

"I was interested in the domestic science course. After attending several chautauquas where the women of the domestic science department gave demonstrations in cookery of several kinds, my interest grew. My highest ambition was to attend the college where all this could be learned, both from practical and theoretical points of view."

"Boys and girls," said another girl, "can make their own way through the Kansas State Agricultural College. I came to this college partly for that reason. I was determined to complete a college course. I had no way to get through college except the way I made myself. This self-made way keeps many boys and girls, especially girls, out of college, because they feel they cannot get along, but they can if they try."

"I did not come to college because I was sent; I did not have this opportunity that falls to most girls. I came because I wanted an education. I knew that in this day those who do not get an education are left to take the back seats; this I never wanted to do."

"The home economics course was a factor in fixing my determination to come to college. Girls do not realize what they are missing without this course. If a girl wishes to teach, no

subject taught offers such high wages, or such broad views. On the other hand, how many girls take up the responsibility of their homes without knowing the first step in managing a household?"

"College-trained men and women are out-distancing others in the race after good jobs nowadays," wrote another.

"College women are holding responsible positions in the business world. They are getting large salaries teaching. Some are practicing in the courts or dabbling in politics. But college women are influencing the world in a far greater measure as they put into practice in their homes the principles they have learned in school. Nowadays we all grant that studying psychology will help us understand Susan and Johnny better, that knowing the chemical laws of crystallization will help us make better cake frosting, and that knowing the biological action of a yeast plant will benefit the bread dough.

"Another reason: I came to college to get confidence enough to hold up my head and talk to intelligent persons intelligently, and, after all, maybe that's the biggest reason. What a lot of talking a person has to do, and how many friends one makes or loses in doing it!"

"Wasn't it Solomon who said 'Get wisdom?' I guess that's what most of us come up the hill for, though some persons say we pick it up much faster the first year we're out of school. It's a good thing to have, however, and the more of it we pack away the better able we are to help ourselves and others."

THE FARMER'S WOODLOT.

Most Kansas farm woodlots are not well managed. The trees are cut without a thought for the future timber crops. Usually, no effort is made to encourage the more desirable species. As a result, the timberland on Kansas farms is not returning half the profit that it should return.

Well-managed timber crops have given larger returns than grain crops. On the Yaggy catalpa plantation of more than 400 acres, at Hutchinson, the owners have made an average annual net profit of \$25 an acre. An exceptional case you say? Yes, that is true, because the timber was managed carefully. Many other catalpa growers have made profits almost as large.

The best soil in the state for the growing of timber is along the creeks in eastern Kansas. The creek timber should be returning a large profit to the owners, but the stand has been so damaged by careless cutting that more than half the trees are white elm, which is not a profitable tree. The best trees of the most desirable species have been cut, and only the scrubs are left behind. As a result, the land is not giving a return that much more than pays the taxes.

If the woodlot owner will not care for the timber so that it will give him a good profit, he should clear the ground and farm it. Of course, there will be some waste land that can't be put into crops, but it will pay to clear all that can be farmed rather than to let the soil grow white elms. If the owner will use the right methods of cutting he can make all his creek timber return a good profit.

When you are cutting for fuel cut the elms and other less desirable species and the crooked trees of the better varieties. Don't cut the straight young walnuts, oaks, and other efficient lumber trees. And don't "rip up" the smaller trees in cutting and getting out the fuel and logs that you cut. The timber may be damaged for years by careless methods of logging. Cut all of the poison vines and wild grapevines. They do great damage to the growing timber.

In short, use good common-sense methods in the management of your timberland and it will return a good profit.

F. B. N.

THE MINISTER'S PART.

Many country churches are not so efficient as they should be. The pastors frequently are not in sympathy with country life. They do not understand the rural viewpoint. Every min-

A Golden Text.

The Lord is my light and my salvation; whom shall I fear? The Lord is the strength of my life; of whom shall I be afraid? —Psalms 27:1.

ister, if he is to be a real farm leader, must live in the country near his church and the people he teaches. In no other way can he be a vital force in the rural civilization that he is trying to lift to a higher plane.

Every country church should be a real community center. The pastor who believes that his work consists in merely preaching sermons is not doing the good in the world that he could do. To begin with, he should have been reared on the farm. Few men reared in the city have a real sympathy with the problems of the soil. They do not appreciate their importance. The prosperity of this nation depends on the solving of the farm problems of to-day.

Most country churches do not pay as large salaries to their ministers as they should. This has been the reason for many rural pastors going to the city, when they should have preferred to stay in the country. No rural congregation can afford to lose an efficient minister when only the salary is involved. Kansas farm land is valuable enough to enable the rural church members to pay a good living salary. And they should do it.

Rural ministers should study farming and know enough about soils, crops and live stock to ask intelligent questions. They must be able to talk to the farmers about farm problems. The minister will find that the rural people will listen to his teachings with a greater interest if he can talk intelligently of the problems with which they have to deal.

To those who like to live among the country fields there is no life that is of greater dignity and value than that of the rural minister. Country pastors will have a large part in the movement toward a better rural life.

F. B. N.

THE ATTRACTIVE LIFE.

Most country life problems will be settled when rural life is made as attractive as that in the city. Everyone requires diversion of some sort, and this is especially true of young persons. The gravest rural problem to-day is to find country amusements that do not depend on, or attract people to the towns.

Why not have some typical rural institutions to cultivate the so-called brighter side of life? In most rural communities at present all of the people depend on the towns to furnish the amusements. This fosters a belief that the city is the only place where a good time may be had. As a result, many young persons go to the city, and they usually are not prepared for skilled work.

It will pay in dollars and cents to let the boys have Saturday afternoon off to do as they please. They will do more work in five and one-half days than they would in the full six. Many a boy has been saved to the country by letting him have this extra half day to go fishing, or play ball, or enjoy himself. Athletics, properly controlled, are essential in the normal development of healthy young men.

Football and baseball teams should be organized in every country neighborhood. Give the boys a chance to get into something in which they are interested. Work on athletic teams will teach them the value of team work and organization and thus prepare their minds for organization in after life. Play the teams from the nearby communities. Make it strictly a rural proposition. It would aid to a wonderful extent in developing community spirit and pride.

Another thing: Bear in mind that the boys are entitled to games and sport, and that they will have them in some form. If you rob them of the opportunity to get their amusements in a proper manner you will drive them to amusements that do not develop health or manly character or a spirit of co-operation.

Do not exclude the other contests

and events that mean so much to the young. Organize debating societies, spelling schools, corn- and stock-judging contests, and other clean and proper organizations that will make country life more interesting. Don't make your boys and girls depend on the town for their amusements. N.

AS TO HOG PRODUCTION.

Hog pastures are not used so extensively as they should be. Some farmers still produce pork in a dry lot on a ration of corn as the main feed. Many of the hog raisers that do depend largely on the pastures for the summer feed do not manage the fields as they should be managed.

Every farmer who raises hogs should have a field of alfalfa or clover for the pork producers to range over. Let them harvest their own feed. It is easier than raising corn. Pork can be produced on pasture cheaper than any other way. If the live stock man would use the most economical methods of meat production, part of the problem of the cost of living would be solved. Kansas farmers can make a good profit from hogs if they will rear them on the cheapest feeds and care for them intelligently.

Don't depend on the pasture alone for feed. Green legumes and grasses do not make a balanced ration. Feed a light grain ration and keep charcoal in the lot all the time. Furnish some shelter from the sun and the storms.

The field must not be overpastured. If you put enough hogs on the ground to keep the growing crop eaten down, they will not make the proper growth. Put fewer hogs on the lot and cut some hay from the field. This will bring on a fresh, tender growth that will be relished very much. The hay, if it is alfalfa or clover of fair quality, may be used as part of the ration for the brood sows in the winter.

There is a movement in most industrial lines toward cheaper production. Hog raisers should extend this movement to pork production. F. B. N.

TOO MUCH GOSSIP FOR HER.

The Beans and Bacon, Also, Contributed to Change a Girl's Mind.

[A former school-teacher describes her experiences as a boarder.]

The first evening I spent with the family, and having just been graduated from high school, thought that I knew quite a bit about the outside world. Wishing to make a good impression, I tried to talk about things I had seen and read, but soon learned they had never seen a "show," and the only book in the house, besides the Bible, was "English Orphans," by Mary J. Holmes. When I mentioned some of the laws that were being passed by congress, they knew nothing about them. I gave the family a chance to talk about their own affairs. Before I went to bed I knew all the gossip and scandal of the neighborhood; how long Eliza Jones had worn her black silk and how many times it had been made over; the price of butter and eggs, and how many bushels of alfalfa seed were raised last year. The next night was the same story, and also the next. By this time I began to notice that the meals were run on the same plan. We had beans for breakfast, beans and bacon for dinner, and beans for supper.

It will pay in dollars and cents to let the boys have Saturday afternoon off to do as they please. They will do more work in five and one-half days than they would in the full six. Many a boy has been saved to the country by letting him have this extra half day to go fishing, or play ball, or enjoy himself. Athletics, properly controlled, are essential in the normal development of healthy young men. Football and baseball teams should be organized in every country neighborhood. Give the boys a chance to get into something in which they are interested. Work on athletic teams will teach them the value of team work and organization and thus prepare their minds for organization in after life. Play the teams from the nearby communities. Make it strictly a rural proposition. It would aid to a wonderful extent in developing community spirit and pride.

What was I getting out of life? It was a mere existence, going backward instead of forward. I realized that by the time I had spent three years in that place I would be plodding along the same rut with the others of the community.

Knowing nothing of the outside world, and caring nothing for it, I decided that if I was to break away from this life that now was the time to do it. My resignation went in the next day, and the following week I left for college.

Gold makes a black mark on some skins, so don't despair. Your Christmas present may not be wholly worthless.

The Kingdom of "Make-Believe."

BY BENICE RADCLIFFE.

There's a wonderful land with castles grand,
Where each dweller is young and gay.
The shores sublime of this magical clime
Know no king—save the god of Play.
'Tis a mystic empire of enchanted desire,
Where quaint fabrics a fancy can weave;
Where a wish can unfold mines of priceless gold—
'Tis the kingdom of "Make-believe."

Its borderland lies 'neath cloudless skies,
And its realm encircles a shrine,
Where the tribute they pay is a gladsome day,
Lengthened out where the sunbeams twine.
Oh, the wealth of lore on this care-free shore,
That its poorest of subjects receive!
The knowledge that brings rich joy on its wings,
In the kingdom of "Make-believe."

Ah, the years were few in this land we once knew!
And we never more can return.
Tis only a dream when we catch the gleam
Where our childhood's watch-fires burn.
We would stretch out our hand to this vanished land.
Its wisdom we fain would achieve,
Could we visit again this cherished domain—
This kingdom of "Make-believe."

SUNFLOWERS.

Did you ever know a plumber to bring the things he needs to fix your bursted pipes?

In Parsons the dog tax is used to support the city band. A brotherly sort of arrangement, surely.

Glen Condon, of Tulsa, Okla., a sporting writer, is to become a preacher. Doubtless he will begin work in Wichita.

Engineer Gearhart, who favors narrower roads, should not forget that, to get any roads at all, you must have broad-gauge boosters.

We notice that the school-teacher in Lawrence who whipped the town bully is referred to as a "littlewoman." Is Brother Thorpe responsible for this, too?

A girl who laughs at a man wearing ear muffs, this kind of weather, or says things about his feet encased in overshoes, should be made to live in Shady Bend.

Publicity, the dispatches say, stopped the epidemic of meningitis in Texas, last week. We refer this to the Christian Scientists for confirmation, and with all respect.

The rule requiring the lifting of the hat upon meeting a woman acquaintance is hereby suspended, while "below zero" weather continues. A stiff nod will do, so far as we're concerned.

A woman in Wichita who had been dumb for several years took a certain treatment, one day last week, and suddenly began to sing. This must have been a terrible blow to the family.

We are wholly unable to understand the fiendish impulse that actuates a man who credits a bright bit of reprint to "Ex." It is one of the queerest things a man may do and get away with it—and one of the meanest.

Butter, wholesale, has gone to 42 cents a pound in Kansas City. With the gas shut off, the coal and bread lines winding around the block, and a lot of poor shows at the Willis Wood, Kansas City is indeed a fine place to live in—we do not think.

One of the terrible possibilities of the future life is the chance that Billy Sunday may be there. Think of listening to that for the remainder of your time in space! But the chances are, perhaps, we shall never meet. You can play this two ways.

A railroad that sells tickets and takes passengers down into the mysterious regions of the "yards" and there holds them for four hours—to beat a competitor—will lose in the long run. Such treatment makes just that many walking and talking "knockers."

Now the Comptroller of the Currency declares his intention to examine every national bank in the country, actually and regularly, and that every security in them shall be scrutinized. It will soon be impossible to make any money in this country if this reform business continues.

Hardly any human being is so despicable as the spotter who persistently insinuates himself into the friendship of a trainman, induces him to violate a rule, and then reports him for violating it. And the company that puts credence in the report of a man like that is managed by a queer mentality.

CATTLE, HOGS, OR HENS?

SOME THINGS YOU SHOULD CONSIDER BEFORE SPECIALIZING.

First, a Good Deal Depends Upon Your Temperament—You May Have a Natural Likin' for Hens and a Dislike for Hogs.

You will have to decide for yourself whether it will be most profitable to raise cattle, hogs, or sheep; ducks, chickens, or turkeys.

Of course, for the man who makes these sources of income merely a sideline to his main business, say farming, it is well to have a few of each, probably two or three cows, half a dozen or a dozen hogs, and one or two hundred chickens. These make a constant income which, though small, will be found sufficient to provide most of the living expenses of an average family.

DEPENDS ON THE MAN.

For the man who specializes in any kind of stock raising, the profit depends on two things: location, and the taste of the individual. What might be profitable in one place might be a complete failure in another, because of the distance from market, expense of procuring proper food, and other things. One man may make a great success with sheep while another at the same place will fail utterly because he dislikes the handling of sheep.

THE COST OF PURE-BREDS.

"Pure-bred animals and fowls are not profitable for the man who derives his profit from the produce of his herd and flock," says E. H. Webster, dean of agriculture and director of the experiment station at the Kansas Agricultural College. "The cost of procuring pure-bred animals is much higher than that of ordinary animals, and the produce, as a rule, is not enough better in quantity and quality to pay interest on the greater investment."

"However, the herd should contain or have access to a pure-bred sire and thus raise its standard by degrees and with but little extra cost."

ALUMNI NOTES.

Pluma Butts, a former student from Mulvane, Kan., was a college visitor last week.

Miss Gladys Seaton, '11, of Jewell City, Kan., visited friends in Manhattan last week.

One of the notable speeches made in the recent Land Show in Chicago was by David G. Robertson, class of '86. Mr. Robertson is in business at 153 LaSalle street, Chicago. His speech was a eulogy of Kansas.

A reunion of the class of 1901 was almost held in Manhattan last week. H. F. Butterfield, in charge of manual training in the North Dakota State Normal School, spent several days here visiting home folks. Miss Jessie Mustard spent three hours in town, Sunday, en route to Mankato, where she is teaching in the high school. H. S. Bourne spent Tuesday on the campus renewing acquaintances and seeing that his younger brother, Bert, was properly started on his college career. F. W. Haselwood, engineer for the State Conservation Commission of California, and Mrs. Haselwood, class of '02, spent Friday afternoon on the campus. Bryant Poole, member of the Barrington Poole Live Stock Commission Company, Kansas City, was seen in Manhattan Friday morning.

WANTED: FARM MANAGERS.

There's a Market for Men Who Can "Take Complete Charge."

That there is an increasing demand for managers of farms—dairy farms, fruit farms, stock farms, and, in fact, all kinds of farms—cannot be questioned. The requests that come in at the Kansas Agricultural College show it. "Send me a man who can take complete charge," most of the letters say, and a good many ask for tenant partners, proposing easy terms for buying. Here is a letter received the

other day by W. M. Jardine, professor of agronomy, which is typical:

"I should like a K. S. A. C. graduate or an advanced student to take charge of 200 head of stock and 1500 acres of land. I should be willing to make a trip to Manhattan, if necessary, to find the right man and explain the business. I am looking for a young man who would like to become a tenant-partner—buy one-half the stock and manage the ranch. What can you do for me?"

Professor Jardine couldn't do much for this man. Managers are scarce. The market is too large for the supply. Most graduates who seek jobs of that sort take them as soon as they finish school in the spring. Just now Professor Jardine has no managers for sale.

DON'T FORGET THE PEACHES

C. V. Holsinger Says No Fruit Tree Stands More Abuse.

Many farmers in Kansas have become somewhat skeptical as to the value of peach trees in the family orchard. This is particularly true along the north-central and western border of the state where cold winters frequently kill the fruit buds. But even with this condition, farmers cannot afford to be without this luscious fruit in the favorable years. Two or three dozen trees of good, hardy sorts will pay immense dividends, in satisfaction if not in dollars and cents, even if fruit be obtained only three out of ten seasons.

In the eastern part of the state, and along the Missouri and Kaw river hills, growers realize about three crops out of five, and on the more favorable elevations as many as seven out of ten may be obtained.

Two or three dozen trees of good, hardy sorts, properly distributed as to time of ripening, will give ample supplies for any family. The cost for stock will range anywhere from 15 cents to 25 cents a tree. One crop on one tree for home consumption will be worth the first cost of all the trees.

Peaches should be planted on upland when possible, and given, the first three years, good cultivation. Trees for spring planting should be ordered immediately. Get one-year-old trees from reliable nurseries, and get them early so they may be planted as soon as the ground will permit in the spring.

Nothing is gained by planting the extra large trees. A good size to order will be one-half to five-eighth inch trees, and these will be four to five feet tall. Cut back in such a way that the limbs forming the frame of the tree will be two and one-half to three feet above the ground. Keep the trees growing vigorously till midsummer. It is not advisable to encourage a late growth of wood, as this is almost sure to be injured by winter freezing. These are some of the good varieties that have generally done well in Kansas: Early to midsummer: Greensboro, Carmen, Early Rivers, Chinese Ching, and Family Favorite. Midsummer: Mountain Rose, Champion, Old Mixon Free, Old Mixon Cling, Elberta, and Crosby. Midsummer to late: Stephensons Rareripe, Salway, Wards Late, Chairs Choice, Krummels October, and Levys Late.

The average life of a peach orchard in Kansas is comparatively short. To keep up the supply it will be necessary to add to the plantation from time to time. C. V. Holsinger, of the extension department of the Kansas Agricultural College, will be glad to advise anyone who needs help in selecting trees.

Oh, Louie!

"Good morning, Ike, haf you hear about Jakey?"

"No; vot's the matter mit Jakey?"

"Vy, he's got appendicitis."

"Vel, vy don't he haf it cut ould?"

"He can't; it's in his wife's name."

—*Implement Trade Journal.*

Preliminary figures compiled by the director of the mint indicate a total domestic production of silver of 57,796,117 fine ounces in 1911, valued at \$31,787,866. The production in 1910 was 57,137,900 fine ounces, of a commercial value of \$30,854,500.

THE WEATHER LONG AGO

FOR FIFTY YEARS THE RECORDS HAVE BEEN FAITHFULLY KEPT HERE.

All the Changes in Manhattan's Climate Are Described in the Collection in the Kansas Agricultural College.

The weather in Manhattan, for more than fifty years, has been faithfully recorded in the Kansas Agricultural College. The files, filled with unfailing interest, take the reader back three years before the Civil War. And not only is this wonderful collection valuable to establish conditions of long ago, but it is of incalculable importance in settling the arguments of the oldest inhabitants, who "remember when the snow, in the spring of '72—."

OLDEST IN THE STATE.

In the attic of the Physical Science Building are kept the instruments that record the climatic conditions. West of the college standpipe are the thermometers and wind vanes electrically connected with the instruments at the receiving station. On top of the Physical Science Building are the rain gauges and the anemometer, an arrangement for measuring the velocity of the wind. These, too, are connected with dials in the receiving room, so that, by looking at a line drawn across the chart, a continuous record may be seen.

This station is the third oldest in the state. The station at Fort Leavenworth was established 22 years sooner and the one at Fort Riley five years before this one. The station at the state university was established ten years later than this one. However, the records of this station are by far the most complete, those in the other stations having been destroyed in the Civil War. There are more than six regular observers and 95 co-operative observers in the state. Prof. J. O. Hamilton, head of the physics department, is in charge of the instruments here. They are provided by the weather bureau.

HERE ARE THE SIGNALS.

The weather flags on Anderson Hall do not indicate the forecasts based upon the observations of this station. The data collected here is sent to Topeka. From all the points of observation they are sent to Washington, and various other headquarters, where they are put on a map, and men experienced in that work point out the probable time of arrival and the path that a storm will follow. These reports are telegraphed over the country, and are seen posted in halls and public places. This college gets its reports from Chicago, where forecasts for the upper Mississippi Valley are made.

Many persons see the weather signals every day, and yet do not know what they mean. Here is the interpretation:

White flag alone indicates fair weather, stationary temperature.

Blue flag alone, rain or snow, stationary temperature.

Half white and half blue flag, local rain or snow, stationary temperature.

Small, three-cornered, blue flag, "temperature flag."

White flag, with temperature flag above, fair weather, warmer.

White flag, with temperature flag below, fair weather, colder.

Blue flag, with temperature flag above, rain or snow, warmer.

Blue flag, with temperature flag below, rain or snow, colder.

Half white and half blue flag, with temperature flag above, local rain or snow, warmer.

Half white and half blue flag, with temperature flag below, local rain or snow, colder.

White flag, with blue square in center, cold wave.

These signals indicate the weather, beginning at 8 p. m. following the day of display and continuing 24 hours.

The college weather bureau has saved thousands of dollars for the farmers and those who have availed themselves of it. It is consulted at all seasons of the year. In haytime many farmers telephone to the weather man, and cut their hay and grain accordingly. Several instances have been reported where a whole season was passed without a damaged cutting by heeding the bulletins. In the fall, grains

and fruit that would be damaged by frost are saved. One man reported, last fall, that he saved 200 bushels of apples by reading the bulletins. Inquiries come in every week asking about rainfall or other climatic conditions in parts of the state where persons expect to move. Curbstone humorists and others may try to ridicule the weather forecasting of the government, but it continues to be of service to the farmers and the people at large, with very few errors.

HELP FOR TIRED HORSES.

What "Jim" Said to "Bill" When They Stopped on the Slippery Hill.

It was colder than sixty—and you know how cold that is—and the hill was steep and slippery, and the load too large for two ordinary horses. "Bill," said the black, swinging his head nervously about, close to his partner's nigh ear, "Bill, the college may need coal mighty bad, and I'm sorry if it does, but here's where I take a rest. I don't care if the whole works blows up. There—."

Just at that instant Jim's front feet slipped from under him and down he went. For a moment he struggled to rise, frightening his partner almost into misbehavior and giving the driver a few minutes' lively work. Not an inch could he budge. There they were, blowing hard, their smoking sides rising and falling, the steam puffing from their distended nostrils. The driver did what most drivers do in such cases. He used his whip, and he clucked and chirped, and said things no self-respecting driver would say in the presence of two fine, hardworking horses like Bill and Jim. Then he swung his arms around as if they didn't belong to him, looked up and down the campus for help, and, after a moment or two, stood at the horses' sides muttering.

And help came. "That smooth-faced person up there in the window, Bill," said the black to the gray, "he's watching this load of coal as if he owned it. He's going to help us. My, but it's slippery here; wonder why these fool men don't put sharp calks on our feet?"

Presently the smooth-faced person, Kammerer by name, followed by a yelling, hurrying crowd of students, deep, a moment before, in the study of agricultural economics, romped down the hill, put lusty shoulders to the wagon bed and the wheels; and the horses, encouraged by such cheerful aid, bent to the cruel task again and hauled the load up the hill.

"Bill," said the black, "I thought that if we stopped there some of those 2200 students would come out and help us."

"It's a fairly safe bet, Jim," the gray responded, "that in every crowd there's a kindly heart. But, land's sakes, it's cold, isn't it?"

CHANGED HIS MIND.

This Boy Entered College for the Fun: but Now —.

Boys, like girls, sometimes change their minds. "I came to college to have a good time," said a student a few days ago. "It was dull in the country. But in less than a year I thought quite differently. I soon determined to get something out of life besides fun and pleasure."

"My ambitions grew. I became interested in real, college work. I chose an agricultural course, and I expect to do something worth while when I have finished college."

Farmers Saw Lighting Outfits.

The rural lighting outfits in the electrical engineering laboratories were seen by more than four hundred farmers and teachers during "farmers' week."

A man was employed by the department to run the machines and explain the operations. The small thirty-two volt outfit was the preference of the majority because of the storage batteries which make it possible to operate the lights when the engine is not running. From the remarks made by the visitors, it will not be long before many farmers will have electric lights in their homes.

TREES SAVE SOIL WATER

WINDBREAKS PREVENT EXCESSIVE EVAPORATION IN DRY LANDS.

For 200 Feet on the Leeward Side and Even on the Windward Side of Hedges the Moisture is Much More Plentiful.

A hedge fifteen to eighteen feet high will lessen the evaporation of soil moisture in its vicinity. On the leeward side the evaporation of moisture is lessened to a considerable distance from the hedge and close up to the windbreak on the windward side. The influence of the hedge on the evaporation of soil moisture depends upon the humidity, temperature, velocity of the wind, and kind and condition of the soil. At a distance of 200 feet from the leeward side of the hedge this influence falls off, but not rapidly. On the windward side the loss from evaporation is less at 50 feet than at 200 or 300 feet and lowest at 100 feet, probably due to the checking of the wind on approaching the hedge. The hedge has a greater influence in retaining soil moisture in fine, sandy loam than in silt loam, but not at such a great distance from the hedge.

A STUDENT'S WORK.

These facts were brought out in an experiment carried on in 1910 by Wilbur Zacharias, a senior in the Kansas Agricultural College. This experiment was continued from October 11 to November 22, or a period of 41 days. Observations were taken and cylinders of soil weighed every twenty-four hours.

The windbreak in this experiment was an Osage orange hedge on the college farm. Mr. Zacharias, who did the work for his thesis, gave the most careful attention to the test. The physics department of the college took temperature and wind velocity readings.

GOOD ON THE PLAINS.

From this experiment and other observations made by F. H. King, of Wisconsin, and R. A. Emerson, of the University of Nebraska, it is to be inferred that hedges would be of great importance in the level plains region, where the hot, dry winds of the summer sweep across the prairies with a high wind velocity, and the evaporation of moisture is excessive. This is not so necessary in moist, humid climates, but hedges or any forest trees of sufficient height and planted thick enough seem to be an effective means of bringing about a solution of the conservation of soil moisture in the great plains region.

HONORS FOR DR. HEADLEE.

The National Entomological Societies Conferred Office on the K. S. A. C. Man.

The meeting of the three national entomological societies of the United States, held in Washington, holiday week, had the largest attendance of many years. The combined programs occupied four days. The programs were full of suggestion for visiting entomologists. Dr. T. J. Headlee, L. M. Peairs, and F. B. Milliken attended. Papers were presented by Doctor Headlee and Mr. Peairs. An exhibition of methods devised by the entomological department for fighting chinch bugs was arranged by Mr. Milliken. This created a great deal of interest. At the close of the meeting, eastern entomologists carried away the bug-infested grasses as additions to their insect collections. Doctor Headlee was elected president of the American Association of Official Horticultural Inspectors, and vice-president of the American Association of Economic Entomologists.

Dr. R. K. Nabours attended the meetings of the American Association of Naturalists at Princeton, N. J., and of the American Breeders Association at Washington. Some of the striking results of his work on inheritance were presented to both societies.

The man who uses his neighbor's tools and doesn't return them couldn't be trusted alone with a tooth brush.

10 YOU SPEAK ENGLISH?

ARE YOU IN THE "DON'T KNOW NOTHING, NO HOW, CLASS?"

Read Good Books, Dean Brink Says, and You'll Soon Stock Your Poverty-Stricken Vocabulary—How About Lincoln?

Do you read good books? Is there a library in your home? Do you double your negatives, split your infinitives, and otherwise improperly conduct yourself when trying to speak English? Do you know when you are wrong, and why? Too many young men and young women neglect this part of their school and college work. Prof. L. H. Beall told some interesting things, last week, about spelling. Here are a few lines from Dr. C. M. Brink, professor of English literature in the Kansas State Agricultural College, dean of the college:

RATHER POSITIVE?

"A large proportion of our boys and girls write and speak atrocious English. So incorrect, so positively vicious is their language that it is a libel on their mother tongue to call it English at all. This statement admits of no controversy. It is an axiom.

"A wide misapprehension prevails as to the proper function of literature. Many seem to think it the most impractical, the most useless subject ever imposed upon defenseless boys and girls in school. This attitude is, of course, taken mainly by those who know neither the thing they condemn nor the practical results proceeding therefrom. They say, 'Teach composition if you have time after teaching useful things—how to hoe corn, how to raise pigs, how to wash dishes. But literature! Bah! Give us something practical, and let such tomfoolery go where it properly belongs.'

"The best way yet discovered of learning how to speak and write the English language with effectiveness, is to read that language as it is found in the books made by the great writers of the world. The union of such reading with constant writing and speaking in emulation of the masters is the true laboratory method. It is the inductive method applied to the work of ascertaining the facts of the language at first-hand, and the application of the knowledge so acquired to the process of attaining power in speech on the part of the investigator himself.

THE WAY TO LEARN.

"How learn to use good English? Observe how those who are the recognized masters of speech use it. If we read the history of the great writers, we shall find that a surprisingly large proportion of them learned their art by seeing that art exemplified in real literature. So far as they have told us the secret of their power, almost without exception they say they acquired their magic of speech through the study and imitation of the great authors that have gone before them. How was it with Ben Franklin and Robert Louis Stevenson and John Burroughs; of Tennyson and Burns and Lamb; of Edmund Spenser and Milton and Pope; of Ben Jonson and Sir Philip Sidney; of Wordsworth, also, and Addison, Irving, and a host of others whose names are conspicuous as men that have used language with great effectiveness. These, and men like them, furnish a great cloud of witnesses, who confirm the truth of the assertion that if one would attain the power to write and speak forcibly he must saturate his mind with the works of those that have had power over men through the medium of language. They learned how to clothe their messages with beauty and force because their own minds were enriched, and their style given form and impulse through absorption, as it were, of the very heart's blood of the masters who went before them.

"Mere study of books on composition, grammar, and rhetoric will not make one a writer or correct his bad habits of speech. He may know the rules of good writing by heart, and violate every one of them. We are all unconscious as well as conscious imitators. We catch from our associates habits of thought, tricks of manner,

forms of speech. If the boy is so wise as to choose a father and mother who speak good English, and select a home of culture where good books are his daily companions; if a liking for good reading is developed in him from his earliest years, it is reasonably certain that he will speak and write correctly and effectively, even though he never learns a formal rule of grammar or cannot recognize a law of rhetoric, as such, though he meet it face to face. He uses the language properly because he learns it from those that use it properly; just as the other boy who does not read good books uses it improperly, and commits linguistic murder with every sentence he utters. If, then, we would counteract the ill effects of evil associations as applied to this subject, we must see to it that all opportunity and all encouragement be given to our young persons to read widely and sympathetically the works of those that have attained a recognized place among the world's great writers.

AS TO PRESIDENT LINCOLN.

"A striking illustration of my thought is found in the case of Abraham Lincoln. It is hardly too much to say that for certain high qualities of speech no American writer has surpassed, if, indeed, any has rivalled him.

"Whence did this man derive his marvelous style—the plain and homely vocabulary, the translucent simplicity, the rugged energy, the soul-stirring music of his speech? It surely was not due to the teaching of the schools. All the training of that kind that he ever had probably would amount to less than a year.

"Exclusive of his inborn gifts, I think we may find an answer to this question by referring to his early reading. He did not read many books, but he read a few until they were his own. But that few! Shakspere, Bunyan, Milton, the English Bible! With these masters furnishing the nourishment of his early thought and life, is it surprising that when he came to write he should write as did they?"

FERNS FOR WINTER WINDOWS.

Here Are Some Varieties and How to Care for Them.

All women admire ferns. The men folk of the family also will enjoy the delicate freshness of the Boston or maidenhair varieties.

The most popular variety is the Boston fern. Even when young, in small pots, the plants are attractive, and they grow rapidly.

The fronds of the Boston fern are two to three feet long and two to three inches across. They are of a very rich green color. Unlike most ferns, this variety will stand some neglect and is naturally strong.

It will stand changes in temperature and is not so sensitive to gas as some of the more delicate ferns. The Boston fern is beautiful when placed by itself in a jardiniere near a window.

The variety called *Scotti* is a miniature Boston fern, the fronds being shorter and narrower, making a dense, more compact plant. It is especially useful for small window brackets.

Other varieties, such as the feather fern, the ostrich plume fern, holly fern, maidenhair and spider ferns, are all beautiful and may be obtained from almost any florist.

In the coldest weather the temperature in which ferns are growing ought never to go below 55 degrees at night. The temperature in the day time should not be over 70 degrees during the winter. Direct sunlight injures the delicate fronds, so put the ferns at a north window. The soil in which ferns are growing must never become dry or water-soaked. Keep the leaves of ferns clean by syringing them with clear water on all bright days. Water for ferns should be tepid.

Don't forget to lay in your orchard heaters before you need them. With the heavy setting of fruit buds, your orchard should, by all means be provided with this efficient means of protecting against frost damage. It is inexpensive insurance.

ON THE WAY TO MANILA.

H. T. NIELSEN WRITES OF HIS VOYAGE ACROSS THE PACIFIC.

A Letter from the Former Assistant in Crops Tells of Interesting Stops at Nagasaki, Kobe, Yokohama, and Other Ports.

H. T. Nielsen, formerly an assistant in crops in the agronomy department, has written an interesting letter from Manila, where he is now stationed in the service of the government. Mr. Nielsen was sent to the Philippines to conduct certain important experiments and investigational work in the interest of an increased hay production. He has not been there long enough to familiarize himself with the situation; and it will be noticed that, with commendable and extremely rare delicacy, he denies himself the pleasure of writing his "impressions" of the country until he has been there a few months. Here is the letter:

To The Kansas Industrialist:

We sailed from San Francisco October 17. and arrived here November 11 after an exceedingly pleasant voyage with practically every day a perfect one. We stayed a day each in Honolulu, Yokohama, Kobe and Nagasaki, and enjoyed ourselves greatly in each place. Saw many interesting things, but none of sufficient importance to chronicle in a general letter of this kind, unless it were the coaling of the ship at Nagasaki. This, being all hand work done by men and women, a little army of them, was very interesting.

I have been very much impressed since reaching Manila with the lack of general information in the United States regarding the Islands. I frankly confess that I was as ignorant as the majority, although I tried to learn as much as possible before coming here. One of the great bugaboos about the Philippines is the great expense they are to the United States. The truth of the matter is they are no expense whatever. They are entirely self-supporting. The only expense the United States has is in maintaining the army, and it has to be maintained somewhere, anyway. All the teachers and professional men are paid by the Philippine government, even the governor general and the commissioners, and not a cent of money comes from Uncle Sam.

I supposed Spanish was a common language here, but it is not by any means. There are 28 or 29 native dialects or languages, each distinct in itself, so there is really great need for the teaching of English so as to get a common, general language.

Manila has been often described and I will not attempt it. We were disappointed in its appearance, and can't say that we especially like it. We are now stationed in the Province of Tarlac, Island of Luzon, where we like it very much.

The climate has been agreeable while we have been here. We have had a few small showers, but not much rain falls this time of year. The afternoons are hot, but are a very pleasant contrast to some of the days we had in Kansas last summer. The nights have been delightfully cool, and sleeping is very fine. There are practically no flies to bother one's peace of mind, but there are some mosquitoes. All beds are provided with nets over them, so a person rests in peace when in bed.

I expect to write you more fully on my impressions when I have been here a few months.

H. T. NIELSEN.

THEIR START IN LIFE.

Ten Students from this College Have Positions and Good Salaries.

Ten graduates of the Kansas Agricultural College have obtained excellent starts in life, as teachers, within the last three weeks. Here is the list with the salaries:

Seth Babcock—Head of the department of agriculture, State Normal School, Cape Girardeau, Mo., salary \$1600.

B. A. Pratt—Head of department of agriculture, State Normal School, Warrensburg, Mo., salary \$1500.

J. C. Mitchell—Teacher of agriculture, high school, Blooming Prairie, Minn., salary \$1200.

O. C. Hagans—Teacher of agriculture, Atchison County High School, Effingham, Kan., salary \$1200.

O. L. Finley—Teacher of agriculture, Spencer, Minn., salary \$1200.

H. E. Kiger—Teacher of agriculture, Park Rapids, Minn., salary \$1200.

C. D. Williams—Teacher of manual training, high school, Winfield, Kan.

Miss Alma Levengood—Teacher of domestic science, Medicine Lodge, Kan.

Miss Lulu Case—Teacher of domestic science, Fredonia, Kan.; resigned at Haskell.

Miss Bessie White—Teacher of domestic science, Haskell Institute, Lawrence, Kan.

WINTER - TIME -

Reading Time

For the Family on the Farm.

Give father and mother, and the boys and girls, something to read in which they are interested and your own fortunes will prosper more.

They have the time, now. They'll be busy in the summer with their crops.

Do You Understand 'Publicity Like This?'

It is not advertising. Don't make that mistake, Mr. Editor. It is taking information to the persons who need it most. And that is exactly what newspapers are for, isn't it? It is taking facts to the farm that the farmer and his family cannot get in college because they have no time to go there.

We Are Sure of Our Facts.

Every article sent from Kedzie Hall to the newspapers of the United States, either for exclusive use or in the "Plate Service," is authenticated before it leaves the office. That makes the farm articles from the Kansas Agricultural College invaluable. Write us about them.

Do You Read THE KANSAS INDUSTRIALIST?

If you are a graduate of the college, a newspaper man with a liking for "Time Copy," a state officer, or the head of a farmers' institute, and are not getting this little paper you are missing some good things about Kansas agriculture. If you do not belong to any of those classes you can get the paper by subscribing. Don't forget that.

It is quoted from New York to San Francisco. It is regularly clipped by more than 1100 newspapers and 110 farm publications. It is read in eighteen countries. And it costs fifty cents. : : : : : : : :

THE
Kansas Industrialist

THE KANSAS INDUSTRIALIST

Volume 38

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Number 14

FOOD FOR \$10 A WEEK.

FOUR PERSONS CAN HAVE ATTRACTIVE MENUS FOR THIS AMOUNT.

Buy the Beef Roasts Large Enough for Several Meals—Purchase Shelf Supplies in Large Quantities—Use All Material Carefully.

This article was written by a young woman in the domestic science course. It gives the itemized cost of the food for a family of four, for one week. The rest of the article will be published next week.

You can buy wholesome, attractive food for a family of four for \$10 a week.

Careful planning in the use of leftovers is necessary, and fruits and vegetables cannot be bought out of season. The most expensive cuts of meat are out of the question, also. It is better economy to buy a roast large enough to last for three or four meals, than to buy meat for every meal separately.

Eggs must be used sparingly, except in summer when prices are low. Instead of white cakes, requiring five to eight egg whites, make gingerbread, cookies, or spice cakes which require only two or three eggs, since yolks as well as whites are used. Corn starch will supply the place of eggs in pumpkin pies.

BUY FOOD IN QUANTITIES

One also must exercise economy in the use of milk and butter. Cakes and biscuit made with water are equal to those made with milk. Vegetables must be bought in quantities large enough to last for several days. One often may save on canned goods if the cans are bought in cases.

The quantities given in the following menus are calculated for a family consisting of father, mother, and two children in their 'teens. The week is in midwinter when prices are high, but, as no ice need be bought, the expenses are about the same as for a week in summer.

There are certain staples or shelf supplies needed every week, and may be counted apart from the remainder of the menus. One must buy them in larger quantities, however, than the amounts required for one week. For instance, about twenty cents worth of flour will be needed for the week, but flour must be bought by the fifty pound sack. This may make one week's supplies seem to cost more, but the average is the same.

SHELF SUPPLIES COST \$3.37.

A loaf of bread will be needed daily, with one extra for toast, amounting to forty cents; and a quart of milk daily will be fifty-nine cents. Three pounds of butter should be ample for the week, and will cost \$1.05. One fourth pound of tea at fifty cents will be thirteen cents, and half a pound of thirty cent coffee will be fifteen cents. Fifty cents' worth of sugar and twenty cents' worth of lard, with spices, salt, pepper and vinegar, costing perhaps ten cents, will complete the list. The total amount for shelf supplies is \$3.37. Materials for white sauce, shortening and all ingredients for hot breads and cakes, except eggs, come out of these shelf supplies.

HERE IS THE SUNDAY MENU.

Start the week with Sunday breakfast and have oranges, four costing ten cents; cereal, three cents; waffles, for which is needed one egg at three cents, with syrup made from brown sugar costing three cents; and coffee. The cream for coffee and cereal must be taken from the quart of milk, which it is better to buy at night than in the morning. Sunday dinner will consist of veal loaf, four pounds for fifty cents; brown gravy; mashed potatoes at five cents; creamed peas (a ten cent can), and a ten cent bunch of celery. Dessert will be fruit gelatine, costing twenty-five cents for one package of gelatine, and two bananas, two oranges, and a few nuts. Cake will

be eight cents. The veal loaf will be sliced cold for supper, and the potatoes left from dinner will be made into salad with the addition of the left-over celery and two pickles costing two cents. Boiled salad dressing will require one egg at three cents, but will last for several meals. There will be enough gelatine left from dinner for dessert, and cake again costs eight cents. The day's expenses are \$1.40.

Monday's breakfast will begin with cereal at three cents. Creamed dried beef will be eight cents, and will be served on toast. Coffee is served at every breakfast, and tea at every luncheon, throughout the week. The last of the veal loaf from Sunday is made into a casserole of rice and meat for Monday's luncheon, the rice and seasonings costing four cents. There will be stewed figs at ten cents and cake at eight cents, for dessert. Meat for dinner will be two pounds of round steak, costing thirty-five cents. The rest of the menu will consist of French fried potatoes, four cents; creamed turnips, five cents, and ginger bread pudding, with sause, seven cents. The total for the day is 85 cents.

PUPILS TALK FARMING.

Crop and Livestock Problems Are Studied by Country Boys and Girls.

Rural school improvement meetings are being held in many of the leading country schools. The programs usually are given by the pupils who have been studying agriculture, and the older persons are invited to talk, also. Wabaunsee county, under the leadership of J. H. Houston, the county superintendent, has been in the lead in this movement. The following program, which is a fair average, was given at the Hinerville school house, near Alma, January 19.

Song, America.....Harry Forinash
Corn—Selection and Care of Seed.....Harry Forinash
Corn—Planting and Cultivation, Wm. Linscott.....Jennie Hiner
Corn Judging.....John Drury
General Discussion by parents and pupils
Song.....Hinerville School
The Jersey Cow.....Grace Lowe
Care and Feed of the Dairy Cow.....Dorothy Mosely
Milk Testing and Demonstration
General Discussion by parents and pupils
Address "Schools for Neighborhood Life".....Prof. E. L. Holton
Address.....Prof. E. B. Gift, Alma
Song.....Pavilion School

In speaking of this meeting Professor Holton said: "You will notice that the farm discussions were led by the boys and girls who had been studying agriculture. This shows that agriculture can be taught in the rural schools. A few years ago it would have been impossible to get boys and girls in the rural schools to get up before a neighborhood meeting and discuss such practical questions."

Fifteen more meetings of this sort will soon be held in Wabaunsee county.

WATERS IS VICE-PRESIDENT.

American Breeders' Association Elects its Officers for this Year.

The American Breeders' Association, which met recently in Washington, elected James Wilson, secretary of agriculture, to be president and Henry J. Waters, president of the Kansas Agricultural College, first vice-president. The association has three sections: Plant breeders, animal breeders, and eugenics. The latter section comprises those interested in the problem of race improvement in man. Dr. C. G. Davenport, director of the station for experimental evolution on Long Island, is chairman of the section. H. F. Roberts, professor of botany in the Kansas Agricultural College, was elected temporary chairman of the plant section, and made chairman also of two of the improvement committees in that section. Professor Roberts read a paper in the convention, describing some phases of his work in looking toward the production of a drouth-resisting corn.

BUY THE CLEAN BREAD.

GERMS MAY BE FOUND ON MOST OF THE UNPROTECTED LOAVES.

A Manhattan Baker Increased his Trade Largely by the Use of Waxed Paper—The Covers Are Not so Very Expensive

C. A. A. Utt, state food chemist at the Kansas State Agricultural College, has studied thoroughly, the unsanitary methods by which most of the bread is delivered to the consumers. He says "package goods always sell better to the customers. Their cleanliness appeals to the buyers."

The butchers have learned to wrap their meats in airtight paper before delivering; the groceryman wraps his goods; the milkman bottles the milk in paraffine-stopped bottles; even candies and sweet meats are now sold in sanitary boxes. The object is to make the products dirt proof, clean and

A STUDENT FARM PAPER.

Every line in this issue of THE KANSAS INDUSTRIALIST, excepting only this piece, was assigned, written, edited, copy-read and otherwise handled exclusively by students of agriculture or domestic science taking the course in industrial journalism. Some of these students entered the writing division in September, 1910, some came in only three months ago.

In many ways the paper should be found exceptionally interesting because it presents the views of the boys and girls from farm homes about whom so many editors, and others, have been worrying. The editorial page, especially, is worth attention. It shows what this class of young people is thinking about; and, incidentally, it proves they are a mighty sensible lot.

THE EDITORS.

pure. This wrapping system is now adopted by a few bakers, but in every town, Mr. Utt says "the old, dirty bakery wagon, with its tobacco spraying driver and its cargo of unwrapped bread going up the street in a cloud of dust, or shower of mud, is a frequent sight."

This is a practice that should be stopped, Mr. Utt says. It is decidedly unsanitary.

BUYERS DESIRE CLEAN BREAD

Selling bread wrapped in waxed paper, is the big step which should be, and is being taken, by the bakers who have modern ideas regarding sanitary stuffs. No doubt many bakers hesitate to adopt this method because of the additional expense and trouble. Some of the largest bakeries in Chicago have obtained some good money-making results. One of the Manhattan bakers has been working on this waxed-paper bread plan for the last six months. A greatly increased trade has been his pay for the experiment.

The chief argument for wrapping bread is this sanitary side of the question. The danger of contagious diseases being transmitted is very nearly eliminated. The great number of hands through which the bread passes, before being received by the housewife, makes this an important precaution. There are other good reasons for wrapping with waxed paper, also.

WRAPPED BREAD DOESN'T GET DRY

It has been proved that bread wrapped in waxed paper keeps in a salable condition three to five times as

long as unwrapped bread, and twice as long as that which is wrapped in common paper. The waxed paper is not porous and no air can get into the bread, thereby causing it to lose its moisture and become hard. The wax paper also prevents the bread from developing mold. The minute bacteria are unable to sift through the waxed paper. Air is in constant contact with unwrapped bread and it soon evaporates all of the moisture in the loaf and tough "heels" and crusts form. The porous nature of common paper makes this possible in bread wrapped in the ordinary manner, to a very large extent. The bacteria on unwrapped or on common paper wrapped bread, are uncountable. No wonder such bread is not sanitary.

Waxed paper around the loaf insures a uniformly distributed moisture. As the bread dries, the drying takes place throughout the loaf, uniformly.

The cost of wrapping your bread with waxed paper is very little—a quarter of a cent to a loaf. When it is considered that the Manhattan baker, who is now handling his bread in the new manner, tripled his trade in three months, waxed paper wrapping appears to be a profitable investment.

PLAN THE HOT-BED NOW.

It Will Reduce the Grocery Bill this Spring Materially.

Better think about making that hotbed for early radishes and lettuce. It doesn't cost much, and it will lower the grocery bill. Here is the way recommended by the horticultural department of the Kansas State Agricultural College:

Dig a hole two feet deep, a little larger than the size of the hot-bed frame. If the hot-bed is to be permanent, the walls of this pit should be lined with brick, stone or cement. When possible, have a shed or board fence on the north side of the bed. It will take less manure to heat the soil. Put two feet of well-mixed fresh horse manure in the hole, wet thoroughly, and tamp. If the manure is not well-tamped, the soil will settle unevenly when the manure decays.

Two-inch material makes a better and stronger frame and will last longer. The front of the frame should be six inches high, the back eighteen inches. Put five inches of dirt on the manure, preferably the richest soil you can get. Fill in around the frame with manure and earth and put the cover on the frame.

Glass sashes are best for covers. Cloth may be used late in the season. The size of a sash is three by six feet. The bed, then, should be six feet wide and as many times three feet long as desired.

The temperature of the hot-bed will be high at first. Use a thermometer. When the heat has fallen to 85 degrees, the seed may be planted. Keep the bed well-watered, but do not soak. Too much water rots the manure too rapidly. Be sure the bed is well ventilated. When sashes are used, they must be raised to let in the fresh air in mild weather. Extra covers should be provided for cold days and nights.

Hot-beds for growing early garden truck for transplanting should be made the second or third week in February. If early vegetables for the table are desired, make the bed the last of January.

Shelf Paper Hint.

Instead of continually buying lace shelf paper, you will find it much cheaper to buy coarse torchon lace the desired width, sew on a piece of tape, and tack on the shelf with very small tacks. Whenever dirty, take off, wash and iron. This will last for years and your pantry will always be fresh and clean.

SET THE INCUBATOR SOON

EARLY HATCHED CHICKENS ARE HEALTHIER THAN LATER ONES.

Have One Person Care for the Machine—Keep the Temperature Constant—Don't Allow the Heat in the Room to Change.

If the farmers desire to get good prices for their early frys, and get the top market price for winter eggs, they must set their incubators by February 15. It would be well to have the hens set then, if they would, but it is seldom that they are so disposed. That is the big reason incubators are invaluable to the farmer.

"Every advantage is in favor of the early hatched chick" said W. A. Lippscott, head of the department of poultry husbandry at the Kansas Agricultural College. "Chickens so hatched are healthier, and will do better, than those hatched a month later. They are ahead of their natural enemy, the chigger, and by the time most of the vermin are here, the chicks have grown to such a size that they can successfully combat them. If the incubators are set so the eggs will hatch in March or April it will not be too late. In some cases the May hatched brood may do, but it is not safe to risk it.

TWO METHODS OF HEATING.

There are two kinds of incubators, classifying them as to heat, those heated by hot water and those heated by hot air. Both are efficient, but as the hot water systems are the more expensive, the hot air machines are in common use. In western Kansas, and all places where there is little moisture in the air, it is well to place moisture pans in the incubators. It will be almost necessary to have brooders and they are much better protection for the chicks than the mother hen. The chicks do not encounter so many dangers as when led about by the adventurous hen, and they are free from being infested from mites from her.

A set of instructions is given with every incubator. They should be followed. However, there are some important rules that should be observed with all machines. Never put the machine where there is a draft or much variation in temperature. It makes no difference whether the room is cold or warm, but the temperature must be constant. A cellar is a good place to keep it if there is not too much heat from the furnace. Have one person run the machine. Successful results demand that the operator know everything that has been done. This obviates mistakes that otherwise might be made.

WATCH THE HEAT.

The incubator heat should be 102 F. the first week. The second week the temperature should be 103 F. Continue this heat until the pipping time. The heat then should be increased one degree and remain at 104 F. Great care should be taken in regulating the temperature, for a small variation will spoil the eggs. With care, there is no excuse for the bad results so many have with their first few hatches.

QUICKSILVER IN 1911.

Estimate of Production by the U. S. Geological Survey.

Preliminary figures collected by H. D. McCaskey, of the United States Geological Survey, from the individual producers show that the domestic production of quicksilver in 1911 was 21,821 flasks of 75 pounds each, valued at the average San Francisco domestic price for the year of \$46.01, at \$1,003,984. A comparison of these figures with the final figures published by the Survey for 1910 shows a gain of 1220 flasks and of \$45,831 in value. There were 22 mines producing in 1911, of which 19 are in California.

THE KANSAS INDUSTRIALIST

Established 1875.

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Student Staff for the Week:

FLOYD NICHOLS - - - Editor-in-chief
ROY DAVIS - - - Managing Editor
THOMAS HARRIS - - - Local Editor

Except for contributions from officers of the college or members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism, under the direction of Prof. Charles Dillon.

The typesetting and other mechanical work is by students in the school of printing, of which J. D. Rickman is superintendent. Both these departments are in Kedzie Hall.

Newspapers and other publications are invited to use the contents of the paper freely without credit.

The increasing demand for THE KANSAS INDUSTRIALIST makes it necessary to insist upon the payment of the regular subscription price, 50 cents a year, invariably in advance. No commission is paid any one for subscriptions, and no advertisements are accepted. The paper is sent free only to the alumni, officers of the state, and members of the legislature. This rule will not be violated.

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SATURDAY, JANUARY 27, 1912.

CLEAN JOURNALISM.

One of the significant movements in modern journalism is the decline of the yellow press. The famous statement, made by one of the great editors of the past, that anything God permitted to happen was good enough for his paper, is no longer a rule of the leaders in newspaper writing. Many things occur every day that should be left unrecorded.

Every man has the right to demand that the paper he buys shall be written so that he may safely let his children read it. If the immoral and unclean things of life are featured they will have a bad effect on all readers, and especially the younger ones. Parents usually realize this, and most of the yellow, yawning journals have their circulation in the street. The advertisers are demanding that the circulation shall be in the home, and this is tending to speed the day when sensationalism will not be found in the American newspapers.

There has been a great amount of talk in the last few years about the decline of the influence of the press. It is true that the yellow dailies have but little influence on the important public questions. The people know that the habit of gross exaggeration is so fixed in most of the editors of the "yellows" that they are not to be trusted to present the world's news truthfully. Readers take the front page stories under the "long scare" heads with the proverbial grain of salt.

The newspaper that presents the clean news of the world in a sane manner, and comments on the news in the editorial columns in a clean conservative way, has a vast influence on its' readers, and always will have.

Any young man who goes into journalism with the yellow daily as his ideal will not make the success that he might make.

MAKE FARM HOMES ATTRACTIVE

It would be strange, indeed, if the average boys and girls, reared on the farms, did not look forward to the time when they would make their home in the city. The common aim of the farmer is to remain on the farm only until he has accumulated enough wealth to enable him to live in the city; the farm being considered only as a temporary place of abode, a mine as it were, where he can go down and dig for a while, and come to the surface to live. If the children are taught to look upon the farm in this light they, naturally, plan to leave it, and make their living elsewhere in the beginning.

Why not build a good house on the farm? Have it heated by a furnace; have it equipped with plumbing, the pressure coming from an elevated tank. Hot and cold water may be had, with bath, and all other conveniences enjoyed by the city dweller. Make the house modern in every sense. Have a lawn, for there is plenty of room. Watering may be done by simply turning a tap from the tank.

There should be a substantial and

attractive lawn fence, so that the live stock and poultry cannot get on the lawn. Shade trees should be planted densely enough to give plenty of shade.

Not only should the house be well built, and have a neat appearance from without, but it should be well finished inside, and well furnished. Why doesn't the farmer have hard wood floors, oak finish; a piano, and a pianola, if he does not have the good fortune to have a musician in the family. Every member of the family should have a bed room furnished in accordance with his own taste, and decorated as he or she likes, so that there may be something to call one's own, in which there is always a personal pride. If the home compares favorably with the best of the city homes, the children will take pleasure in entertaining friends from city or country.

In general, prepare to live on the farm, not merely to exist there, and boys and girls will have a much better opinion of the farm and farming. They will not be eager to leave, if they see some good reason for staying.

MODERN METHODS WORTH WHILE.

A man can't hope to be a success on a farm if he is careless about business methods and management. The latest method for a joyful career on the homestead is none too good for the modern farmer. Time and poor farming have wrought wonders with the soil fertility, but the balance is on the wrong side of the ledger. The fertility has been depleted.

If a merchant left boxes of merchandise standing behind his store, exposed to the weather, a board would inquire into the soundness of his mind. A farmer can leave his farm implements out in the rain or storm, and his conscience won't hurt him a bit. The insanity board won't be looking him up, either.

Letting the harness go from bad to worse is another leak that needs stopping. The first rainy day, when farm work is interfered with, wash the harness with soap and water. Give it a thorough cleaning and oil it with a good grade of harness oil. If the harness needs repairing, fix it. Don't permit the little things to go without attention.

Scores of farmers are becoming rich, in spite of their slip shod methods. Most poor farmers, however, are where they belong, in the rear of the procession. This is right. A man not interested enough to husband his resources, either from prejudice or lack of knowledge, isn't entitled to a single peep at success.

The farmer who succeeds with slip shod methods could have been a much greater success, if he had been a little more modern. Look around in your own county. Aren't the prosperous stockmen and farmers, men who are very careful in their undertakings, reading all the up-to-date literature about their business? They attend the farmers' institutes, also.

ESTABLISH COMMUNITY CENTERS.

There should be more sociability among farmers. The rural life is lived more or less away from other people even at the best, and every effort should be made to encourage social intercourse. A community center should be established in every country neighborhood.

A building should be erected at a cost of three thousand dollars, that would be large enough for the average community. Here a farm library could be established and the farm papers kept on file. Laboratory apparatus for the examination and testing of grain and grass seeds could be provided, and the young people could study that most interesting subject, the germination of seeds. A farmers' club could be organized. Why not have these things? The people of the cities have their clubs, lectures and social good times; and this is the "glare and glitter" that attracts the country boys and girls away from the farms.

The women and girls would be benefited much by such a center. Everyone needs to have social intercourse and the women folk of the farms prob-

A Golden Text.

O, give thanks unto the Lord; for he is good: because his mercy endureth forever.—*Psalms 118-1.*

ably are alone more than any other class. The men and boys see one another in the fields, and quite frequently stop for a chat over the fence. Thus they are not so lonely as the home makers. Rural telephones have done much to make life more agreeable for the women, but they never will take the place of personal conversation. A community center would do much to brighten the lives of the country girls and women.

And this is certain: it would be much better for the boys to meet one another socially in the evenings at such a center than to go to the corner grocery store. The craving for social intercourse will be satisfied, and every rural resident should recognize that

THE PATH OF KNOWLEDGE.

Education is the supreme possession of men. It is the source, indirect or direct, of all other good and noble things.

The traveler, who enters the path of knowledge, will find it dark, and his progress frequently impeded. As the journey is continued, light is seen, the obstacles disappear, and at the end the traveler is rewarded with an education. The traveler is a student.

This is the interesting tale portrayed by Mrs. Alberta Randall Wheelan, of New York City, in the new book plate, designed for the Kansas State Agricultural College. "The Path to Education" is the name of the engraving. It is to be put on the front cover of every book in the library.

"Mrs. Alberta Randall Wheelan is one of the leading artists in the United States in designing book plates: "A. B. Smith, librarian, said in speaking of the design, "We feel highly complimented by the work done for us. It

At Parting.

Why should we say good-bye?
Though we go a separate way?
Over us both is the same blue sky,
And the same stars shine when the night
nigh,
And the same sun guards the day!

Still are we one, my friend.
Though you wander away from me,
I shall go with you wherever you wend,
And some sweet day at the journey's end
You'll turn, and my face you'll see.

For it isn't the miles we go
That keeps us far apart.
The storms may smite and the winds may blow,
But never a sundering wave may flow
Between me and your heart.

I stay, while you will roam,
On a wild world-beaten track,
But over the hills and the vales and the foam,
At last your feet will come drifting home
And I will welcome you back.

And if you should come no more?

Why, then, should we say good-bye?

Ah, never a sea but has a shore,

And Death may thunder and rage and roar,

But love can never die.—*The Beacon.*

SUNFLOWERS.

Some men cast a shadow even on a cloudy day.

If a student should go into business, would he take notes?

The worst criminals are not always found behind prison bars.

It is possible to undo what you say, by actions; but your actions are difficult to undo by words.

You can't accomplish anything worth while in scientific farming unless you exert a lot of energy and ambition.

The numbers on the lecture course are highly instructive. You learn not to put a derby in the holder under the seat.

Raicevich, the latest strong man to take a fall out of Gotch, should go in for the track, also, if there is anything in a name.

The warmth of loving promises does not help much these cold times when the landlord doesn't shovel the coal into the furnace.

A sign post on a farm near Manhattan bears the inscription, "No hunting aloud." We take it that a still hunt is permissible.

Some peoples minds are like a place of public meeting. All kinds of opinions appear there in turn and leave it just as they found it, empty and open to every comer —.

A news item reports there is a senator who has not paid for his seat. Here is a chance for practical reformers to prosecute the gentleman for an infringement of the anti-pass law.

Average farming is not profitable, and it never will be. Crop yields can be raised by teaching the children the simple truths of the soil. Education is one of the great rural problems.

N. A. Morosoff, a Russian socialist, has been sentenced to a year in jail for writing poetry. After reading some of his effervescences, we think the sentence should have been two years.

No wonder the head of the journalism department is ever happy and carefree. A surgeon has reported that fat men have twenty per cent fewer disease germs in their bodies than those who are thin.

The Kansas City Star is using some small, plain words in its recent issues: as, Sneezakaritchnekoff and Bhomrabiromry. Professor Beal might "get some data" if he used these in a spelling contest.

The Kansas Farmer says, "Joseph Moncrief, yet on the sunny side of forty, is a true Kansan, though he lives in Cowley county." Why should this be held against him? What is the matter with Cowley county?

A Manhattan woman bought nineteen dollars' worth of new wearing apparel one day last week, and put it in her closet. Next morning the closet caught fire from spontaneous combustion. And yet there are persons who insist that women do not wear warm enough clothes.

The New Home.

"There's a gas works north of you, a glue factory to the east, on the south you have an abattoir, and the reduction plant is to the west."

"What's the advantage?"

"You can always tell the direction of the wind in an instant.—*Farmers' and Drovers' Journal.*



The Library's New Book Plate.

certainly is symbolic of the students' course through college."

The dark, obscure background in the drawing represents the period of ignorance in the students' life; when there is no knowledge of the higher things.

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CONCERNING FARM COLLEGES.

The American nation was born in a cradle of extravagance. To the early settlers on the eastern coast the forests were a nuisance, and new land might be had for the trouble of clearing it. This land was handled in a reckless manner, with no thought of the future.

This bountifulness on the part of nature spoiled the careless settlers. It fostered in the popular mind the habits of wastefulness. As a result, the United States is, today, one of the most wasteful nations. If something is not done to retain the natural products, such as soil fertility and minerals, it is easy to see what lies in store for the future. However, efficiency experts are coming to the aid of the people. For the large corporations there are men who have made system such a study that they are able to show the companies how they can reduce expenses materially.

The soil is the source of the nation's prosperity. The farmers also have efficiency experts at their command. The agricultural colleges are experimenting with grain and stock breeding, and all other rural problems. No farmer could afford to carry on experiments in the problems that the stations are solving.

The army and navy may protect the country but science and economy alone can preserve its resources. The agricultural colleges are the strongholds of prosperity, today.

BUILD CEMENT BRIDGES.

The people of the state must decide whether they will have good, substantial, permanent bridges, built under the supervision of men who know their business or light, shaky, dangerous bridges, put up by a foreign contractor.

W. S. Gearhart, the state highway engineer, has been urging the people to build cement bridges which will be safe, and a credit to the community, and the bridge companies have been doing their best to defeat his plans. Reason it out. Which is the better, a cement bridge which will last for a century and cost nothing for upkeep, or a tin bridge which will be a constant expense to the tax payers?

Celery eaten freely is good to cure neuralgia.

FIX UP THE DINING ROOM

HERE IS A LIST OF THE THINGS YOU WILL NEED.

A Good, Durable Oak Table Will Cost \$16—White Irish Linen is the Best —Buy Glassware of Medium Weight.

Strive for simplicity and beauty when furnishing a dining room, but don't overlook the fact that the furniture must be serviceable.

If there is a built-in side board the only other large articles needed will be a table and chairs. A good, durable, substantial looking table of polished quarter sawed oak may be bought for from \$16 to \$20; chairs to match cost about \$2 each. If the side board is not built-in, a good cabinet may be purchased for about \$18. The rug, which should be of a neutral color or else match the color scheme of the room, costs from \$10 upward.

Linen is the next important item. It should be pure white or creamy. Irish linen is best, although it is the most expensive. Doilies will serve for breakfast and luncheon, therefore the following list will meet all ordinary demands of the average family.

3 ordinary table cloths, at 75¢ a yard.....	\$6 00
1 fine table cloth, at \$1.25 a yard.....	2 50
1/4 dozen fine napkins, at \$3.50 a dozen.....	1 75
1 dozen ordinary napkins, at \$2 a dozen.....	2 00
6 center pieces.....	2 50
1 dozen small doilies for use under glasses, etc.....	1 00
1 dozen pads for doilies.....	50
1 silened cloth.....	1 00

The cost of the linen will vary with the quality of goods purchased, and the amount needed will depend on the size of family and the social activity of the mistress. The use of doilies is an economy in the laundry and is a protection for the table cloth.

China varies in price, but a good set of Austrian ware will cost about \$10. Use care and taste in selecting and buy the quiet design. It is more economical to buy inexpensive glassware of fair weight. The expense of breaking is then reduced to a minimum.

A standard plated silver ware gives better service and is more suitable for the average income. Therefore, the cost should be:

6 teaspoons.....	\$1 50
6 tablespoons.....	3 00
6 knives and forks.....	4 00

Quiet, good taste, simplicity, service, and beauty should be the aim of the woman who furnishes her dining room.

ALUMNI NOTES.

Miss Nell Hickok, '11, visited her sister in Manhattan, Sunday.

B. F. Eyer, professor of electrical engineering, went to Junction City, Saturday.

G. A. Bushey, '10, has been visiting college friends. He is working for the Westinghouse Electric Company, of Pittsburgh, Pa.

Miss Clara Berg, '11, is instructor in domestic science at Bethany University. This is the first year the subject has been taught there.

H. E. Totten, '10, has been visiting college friends. Mr. Totten is the foreman of the cattle department of the Deming ranch, at Oswego.

Susan Davis, '10, and V. E. Oman, '09, were married December 27, at Arkalon, Kansas. Mr. and Mrs. Oman will live in Idaho. Mr. Oman is an electrician.

The Hamilton literary society held its preliminary debating contest Tuesday, January 16. The following men were chosen to represent the society in the intersociety contests: M. D. Collins, E. H. Vaughn, H. H. Fenton, James West and Floyd Hawkins.

A TWISTER IS BEING BUILT.

Shafting Two and One-Half Inches Through May be Tested.

A Torsion testing machine is being made in the shops of the Kansas State Agricultural College. Most of the work is being done by the students. A torsion testing machine is used to test the twisting strength of iron shafting. At one end of the machine is a series of gear wheels run by a belt. Because of the different ratio of the gear wheels, the power transmitted by the belt pulley is increased greatly.

On the end of the shaft of the inside gear wheel is a large "twisting head" containing a set of jaws, similar to pipe jaws, to hold the iron shaft. This head weighs eleven hundred pounds, and was cast in the college foundry.

One end of the shaft is fastened in the jaws of the head which revolves. The other end is held in a weighing head which is connected to a set of levers by means of which the amount of energy used to twist the shaft is measured. Shafting as large as two and one half inches in diameter can be twisted.

The weight of the machine is about three tons. It will be finished in the spring and will be used for testing material in the engineering laboratory.

CARE FOR CUT FLOWERS.

You Can Keep Them Sweet and Fragrant for Two Weeks.

Proper care of cut flowers will double their lease of life. Even hothouse roses, usually the shortest-lived of blossoms, can be made to retain their beauty and fragrance for two weeks, if one will take the trouble to boil the stems.

To do this, set a pan of hot water on the stove, and when the water begins to boil, place the stems of the flowers in the water to the depth of one inch. Hold the flowers carefully to prevent their touching the sides or bottom of the pan. Allow them to boil fifteen or twenty minutes. Remove the flowers and clip off the portions of the stems that were in the water. They are then ready to be arranged in the vase or bowl.

Many persons have poor success in keeping cut flowers because they do not put fresh water into flower vases every day. The stems of the flowers should be clipped every day, to enable them to take up more water. Never leave cut flowers in a warm room over night. Set them in a cool place.

GIRLS CAN EARN MONEY.

Many Profitable Side-lines May be Found in the Country.

A girl in the country need not be without spending money if she tries to get it.

Many communities, which have no school near, offer an educated girl a chance to teach the younger children. The parents are willing to pay for the teaching but do not care to send the small children a long distance to the district school. Giving music lessons is another source of income, for many persons will not send children into town for a musical training but will pay a teacher near home. The teacher may also be in demand when music is needed at the social gatherings.

If care is used poultry will yield a good return. One woman who owned 27 hens cleared \$36 from eggs in four months besides supplying her own table. She fed a balanced ration and as it was winter the hens were penned. The early fives and the clean eggs all fresh from the farm are preferred to the storage product. The pure milk, the rich yellow butter and the neat packages of home-made cheese will find a ready market in the city; for there the milk may be doctored, the butter colored and the cheese stale, when purchased at the store.

Early vegetables just from the garden are eagerly sought after by the housewives catering to the fanciful appetites of city families. Fruits and berries, if carefully picked and neatly boxed, will sell in the city for table use and canning purposes.

Clear rich jellies, delicious jams, firm, pungent pickles and even canned vegetables may help increase the bank account. These dainties will be preferred to the jellies and jams that are half glucose, and the vegetables that you never can be sure are wholesome, which are sold in the city markets.

A girl must cater to the tastes of her customers and use care, neatness and cleanliness in handling her produce. She can then build up a good steady market for all the lines that she can handle.

Never use soap and water on varnished surfaces.

NAMED YOUR FARM YET?

HAVE ALL LETTERHEADS CARRY AN ATTRACTIVE TITLE.

Printed Stationery is a Profitable Form of Advertising—And it Makes a Favorable Impression on Strangers—The Cost is Very Small.

The only business that does not pay to advertise is the business that fails. Farming is considered a business, a capitalistic venture, nowadays. Anything that can advertise the farm makes the products of that farm just that much more in demand. One of the most convenient, cheap, and profitable ways to let people know about your farm is by having attractive farm stationery.

DISPLAY THE FARM NAME.

Farmers over the state are using printed stationery. The expense is very slight. It makes the farm a business, and not a place to stay until something better turns up. Strangers are instantly and pleasantly attracted when they open a letter from a farmer and find the stationery contains the name of the sender and the farm name displayed on the letterhead. There is something about the form of such a letter that seems to guarantee that the sender is on the job all the time and does things in a business-like manner.

ADVERTISE YOUR SPECIALTY.

Various forms are used for the letterheads. Many of the styles include cuts, advertising the owner's products. For example, W. A. Brown has a letterhead that says in a business-like way "W. A. Brown and Family, Pinehurst." "J. B. Morrison and Company" is the way a farm near Overbrook has its letterheads read. Farm products are presented to the receiver of the letter through the medium of printers' ink and attractive type. Most of the letterheads contain directions about the way to get to the farm and the way to address letters to be assured of their safe arrival. And it pays. Of course the nearest printer is always glad to quote prices and do the work.

TRAIN THE BODY, ALSO.

"We Desire to Develop the Health of all Students,"—Lowman.

Physical education, the new branch of learning at the Kansas State Agricultural College, is popular with the students. This work is given in the new Nichols Gymnasium.

"So far 500 students have received benefit from this department," said Guy S. Lowman, athletic director at the college. "We are hardly on a working basis yet, but in addition to 'varsity and class teams in the sports, regularly scheduled classes in gymnasium work are offered to the students."

The large floor of the gymnasium has been in use all of the year, but the wrestling rooms and the pools have not been finished. They will be ready for use within two weeks. Every day, now, one can drop in at the "gym" and see classes of nearly 100 men in black jerseys and white trunks attempting to follow C. F. Holladay, physical director, through the exercises.

"It is the aim of the physical department of the college," said Mr. Lowman, "that every boy and girl shall have the opportunity to participate in some form of physical exercise adaptable to their needs, tastes, and capacities. Only a small per cent of the student body received any benefit from the physical department in the past. Now the supreme object is to develop physique and health in all, rather than athletic capacity in a few."

Three hours a week of physical training is given every student enrolled. During these three hours he has an interesting diversion. His body is refreshed, all of the old, unused muscles and sore spots are loosened up, his nerves are released from their tiresome work of the day, and he feels like a new man. In the "gym" class he meets his fellowclassman upon different grounds. In the class room, it is the battle of brains that stimulates

life. The student who failed in recitation in the morning may get even with his superior in books in the afternoon, on seeing him try to jump across the floor in a squat position with his hands on his hips, or attempt to turn a back sommersault, and then a front one, several times in succession.

When the class is over a hot shower bath is taken, followed by a cold one, and the student goes home to his tasks with a clear brain, a sound beating heart, and a smile on his face. His lessons are easier to get, as his mind and body are working in harmony.

TELEPHONES FOR THE ENGINEERS

They Will Have an Intercommunicating System in Their Building.

The physics department is installing an interphone system of twelve telephones in the mechanical engineering building. The direct line of the system is a cable 800 feet long. To reach the offices from the main line, 400 feet of cable is required. The telephones are so arranged that any telephone can

Own Land.

The man who owns the land is a man the equal of any other man in a triumphant democracy. Why, I have loved Iowa ever since I saw that picture.—Andrew Carnegie.

call any other on the system without any central connection. But when any telephone is to be connected with the town system the main telephone at the college must be called. The connection is made by moving a switch. The ringing is done by means of push buttons operated by common dry cells. Every telephone has twelve push buttons, one for every telephone on the system.

Under the old system when any of the professors in the mechanical engineering department who do not have their offices in the main office are asked for, the clerk in the main office must call them. With the new system, every part of the engineering building will be reached, saving much waste of time. Telephones will be placed in the following offices: the main office of E. B. McCormick, dean of the mechanic arts group; the office of the secretary to Dean McCormick (this is the trunk or main phone); the office of J. D. Walters, professor of architecture and drawing; L. E. Conrad, professor of civil engineering; A. A. Potter, professor of steam and gas engineering; G. E. Bray, assistant professor of shop methods and practice; the reading room or department library; the boiler room; the heat and power office; the machine shop office; the gas engineering laboratory; and the hydraulics laboratory.

CAN YOU PACK A TRUNK?

Here is the Way a Girl's Clothes Should be Arranged.

Most girls dislike to pack a trunk. Here is the way to place the clothes so they won't be crushed.

All heavy articles should be put in the bottom. Next come blankets, petticoats, bathrobe, and those things which crushing will not injure. Then lay the starched things the dress skirts, carefully folding lengthwise, and the wool and silk waists in with tissue paper in the sleeves to prevent crushing. All breakable articles should be well wrapped and packed near the center of the trunk.

In one section of the till should be put the toilet articles, collars, ties, gloves, handkerchiefs and writing material. If one must take some liquid in a bottle, always put a cloth over the stopper and fasten securely around the neck of the bottle. Wrap well and place in the till. These precautions will prevent spilling or breaking.

In the other section of the till may be put the veil, scarf, and hat, unless the hat is too large. If so, wear it.

Never put ink or liquid shoe blacking in a trunk. It is taking too great a risk, when such things can be bought at one's destination.

BEWARE THE TREE MAN.

BUY NURSERY STOCK FROM REPUTABLE FIRMS—not from PEDDLERS.

Prune Carefully Before Planting—Forks and a Whorl of Branches Are Not Desired by Fruit Men—Strong Trunks Needed.

When selecting your nursery stock, particular attention should be paid to the roots and branches, says Albert Dickens, professor of horticulture at the Kansas Agricultural College. Short and compact roots are much better than long, spreading roots. They are not so easily broken and are not so hard to handle. Trees with too many branches are to be avoided. The best orchardists are buying yearling stock without branches. See that the roots and branches are alive and fresh.

PAY FOR THE GOOD STOCK.

As a rule, it does not pay to buy your nursery stock of a peddler. You don't know what you are buying and have no recourse in case the stock does not prove satisfactory. Beware of the dealer that is trying to sell you high-priced stock at a low price. No one is going around giving valuable nursery stock away. Buy your stock from some reputable firm that you can depend upon. Even if they do charge you a little more than the peddler, you will have much more satisfaction in the end. Buy sparingly of new stock or novelties, and try it out if it looks good. If it proves to be all right there is plenty of time to stock up. It is a poor policy to buy large quantities of stock that you don't know anything about. Don't buy stock just because it is cheap.

PRUNE THE TREES EARLY.

"Young trees should be pruned and carefully attended after they are set out," Professor Dickens says. "A few hours spent in careful work in the orchard when it is young is much easier and more satisfactory than days spent in hard labor after the trees have grown for seven or eight years uncared for. The tree that grows to a bearing age with no care is a hard proposition. The beginner must be careful, in his effort to make the tree conform to his ideal, that he does not overdo the work."

"In pruning a fruit tree two things must be taken into consideration: The tree must be strong enough to carry its load, and spreading enough to admit light to the inner branches. Forks are not to be desired in a tree, and a whorl of branches from a single point is bad for any tree. The best form of tree is the one with a strong trunk, branches well distributed and no two coming from the same point. It is hard to obtain this ideal, but it should be obtained as near as possible."

NOW THE LIGHT WON'T FAIL.

A New Switchboard is Being Installed in the Shops.

A new, \$5000 switchboard is being installed in the mechanical engineering building at the Kansas Agricultural College. It is much larger than the old one, and better arranged. Every building is to have a switch on the new board. Formerly there were two or three buildings on the same switch and if anything went wrong at one building the other buildings on the same switch were out of light and power. By the new arrangement power can be given to one building without giving it to any of the others.

The turbine and dynamos are now being moved into the mechanical engineering building. These probably will be ready for use by February 1. As soon as they are ready they will be started, and the rest of the machinery will be moved.

Creamery Has a New Churn.

The demand for the products of the dairy department of the Kansas State Agricultural College is growing rapidly. To meet this demand the department has installed a churn of 500 pounds of butter capacity, and also a 200 gallon agitator, pasteurizer and ripener combined.

BREATHE THE PURE AIR.

A WELL VENTILATED HOME IS NECESSARY FOR GOOD HEALTH.

Fireplaces Will Produce Desirable Currents—Open the Windows Wide at Night—You Should Have Pure Oxygen at All Times.

Breathe pure air and plenty of it. This you may get out of doors without second thought; but only through proper ventilation may you get it in the home. Since most homes cannot be well ventilated naturally, it becomes necessary to assist natural methods, or to provide for artificial methods of carrying off carbon dioxide, ammonia and organic matter, given off by the body.

Ventilation depends on two things; the rate at which foul air rises, and the rate at which it is diffused. The house should be carefully planned for the escape of impure air, and the supply of fresh air. In the warm, summer weather, ventilation is an easy matter, for then a change of the air may be accomplished by opening the windows wide. In cold weather, this cannot always be done, and it is necessary to devise schemes for changing the air of rooms without inducing draughts.

FURNACES HELP.

With furnaces, the cold air from the cold-air shaft comes in contact with the hot jacket surrounding the furnace, and is warmed; this warm air then is distributed to the rooms as needed. A furnace, if properly installed and intelligently operated, will help supply good air. It is an ideal ventilator, when supplemented by sufficient outlets.

The fire-place is a good ventilator. Many people shut up the fire-place tightly, in the summer, to hide it, not realizing they are cutting off an excellent supply of fresh air. In the winter, a fire-place is almost essential for proper ventilation. It is powerful enough to draw all the air it needs through any convenient opening. Part of the air becomes heated and passes up the chimney; while the rest rises to the top of the room, becomes cold, and falls to the floor again. Thus, constant currents of air are produced.

A house depending on windows for ventilation should have frames made to fit the windows and covered with sanitary gauze. The cloth may be doubled and stitched together at two edges, making a bag which can easily be slipped on and off the frame, for frequent washings. This allows slow ventilation, prevents draughts, filters out much dust, and interferes little with light.

Windows are not primarily for ventilation, but the average home still depends upon them. They should be lowered from the top. A small opening will allow much air to pass through. It is better to have a small opening all of the time, than a large opening occasionally. The impure air is always near the ceiling; for this reason, windows should reach very nearly to the top of the room, so that when opened the layer of impure air near the ceiling may be removed. They should be placed in diagonally opposite walls, to allow cross-currents.

OPEN WINDOWS AT NIGHT.

To furnish fresh, clean air in the daytime is important. To insure it at night is even more necessary. Open the windows wide. At night, during sleep, the body carries on its recuperative work to the greatest extent, the wastes of the day are replaced, reserves laid by, and these all require large amounts of oxygen for their perfect operation. Certainly the Creator, who made animals dependent upon oxygen for their life, would not shut off their supply for eight to twelve hours of darkness, so that the idea that "night-air" is not suitable for breathing should not be entertained. Its composition does not change when the sun sinks behind the horizon, as some people seem to suppose.

Here Are the Butter Contest Scores.

In the bi-monthly butter contest held at the Kansas Agricultural College in 1911, first place was awarded to Nels O. Nelson of the Continental Creamery

Company, with an average score of 92.4. George Steffenson of Atchison took second place with an average score of 91.08; J. A. Beckman of Great Bend received third prize with an average score of 90.5, and William G. Engle of Abilene received fourth prize with an average score of 89.5. Eighteen butter makers took part in the contest in 1911, and this, the dairy department believes, is an excellent showing with only about 60 creameries in active operation in the state. George Steffenson of Atchison had the highest scoring tub of butter for the year; N. O. Nelson, second highest; J. A. Kauffman of Abilene, third, and P. J. Springstien of Wayne, fourth highest.

A YEAR'S CLOTHES COST \$75.

A College Girl Can Dress Very Well for this Amount.

[The stenographer disagrees with the story printed last week, and here gives her ideas of what it should cost to dress.]

The average college girl does not spend \$125 a year for clothes. She need not spend more than \$75. Many girls who are working for \$65 and \$75 a month do not spend, on an average, more than \$125 a year for clothes. The things a college girl cannot make at home should be bought ready made. She cannot afford to pay a dressmaker's fee for every thing she wears, as it will soon amount to more than the material costs.

Any girl expecting to take a four-year course in college should not let her allowance for clothes exceed \$75 a year. She must not spend that much the first year, for there will be additional things needed the second, third and fourth years, and she must allow for these.

True, a girl may not have all she would like on this amount, and many girls spend a great deal more than \$75 a year. Some don't spend that much. But there are many expense accounts to be taken into consideration in the four years of college work and clothes is but one of them. She must do a little mending now and then and keep the buttons sewed on, and, more than all, keep her clothes clean and neat. Here is a list of things with which the average college girl could do very well:

NEEDED EVERY YEAR.

2 pairs high shoes.....	\$ 6.00
1 pair low shoes.....	3.00
Rubbers.....	.75
6 pairs hose.....	1.50
2 pairs gloves.....	1.50
1 pair long silk gloves.....	1.25
3 shirt waists.....	3.00
1 lingerie waist.....	1.50
6 collars.....	1.50
1 skirt.....	5.00
2 wash dresses.....	6.00
1 summer hat.....	4.00
1 winter hat.....	4.00
1 black underskirt.....	1.50
2 pair corsets.....	2.00
4 suits underwear.....	2.00
3 corset covers.....	1.50
1 dozen handkerchiefs.....	1.00
Pins, combs, ribbons, etc.....	10.00
	\$57.00

NEEDED EVERY SECOND YEAR.

1 tailored suit.....	\$12.00
1 silk waist.....	3.00
1 scarf.....	1.00
1 pair good shoes.....	4.00
2 white petticoats.....	4.00
2 night dresses.....	1.50
4 aprons.....	1.50
1 pair long kid gloves.....	3.00
	\$30.00

NEEDED EVERY THIRD YEAR.

1 coat.....	\$16.00
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NEEDED THE FOURTH YEAR.

Graduating dress, cap and gown.....	\$26.00
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This makes a college girl's clothes cost \$300 for four years, or \$75 a year.

Name Plates Are Almost Finished.

The foundry has cast the name plates to go on the doors of the recitation rooms, offices and laboratories of the college. The machine shops are filing the plates into the proper shape. These plates are to be used in all the buildings of the college. The plates on the laboratories and recitation rooms will have a card placed in them giving the schedule of classes taught in the room on which the plate is attached, the teachers of the classes and the hours taught. The plates on the office doors will contain a card with the names of the professors or teachers with desks in the room on which the plate is fastened.

Religion, which was once an institution of the state, is becoming more and more the faith and ideal of the individual soul.

PRODUCE FOOD AT HOME.

ALL THE FARMERS' INSTITUTES WILL DISCUSS DOMESTIC PROBLEMS.

Butcher Your Hogs and Calves—Divide Fresh Meat with Neighbors in the Summer—Do You Irrigate the Garden?

Home food production will be the subject for discussion at the monthly farmers' institute meetings for February 10. The topics given here will be sent at once to all of the institute organizations, and will form the basis for the discussion.

MEATS

Winter butchering; curing of pork. Coöperative slaughtering of calves, sheep and hogs, and dividing meat throughout the year.

The average proportion of meat bought by farmers.

Is it possible for every farmer to grow all the potatoes for his family use?

Is it possible for every farmer to grow all of the cabbage, tomatoes and other garden stuff for family use, for the entire year?

The average amount of canned goods bought by the farmers.

What proportion of the farmers grow strawberies and other berries for family use?

Probable outlay of the farmers for fresh and canned berries.

Are there many farmers in the community who probably do not grow any berries, or buy any, for family use?

What proportion of the farmers grow enough of the following fruits for home use for all the year: Cherries, apricots, plums, grapes, and apples?

What is the average yearly outlay of farmers for fresh and canned fruits?

Proportion of farmers who systematically irrigate their gardens by winter and spring flooding, or by ditches from reservoirs or tanks, using windmill power? About how many in the community irrigate with engine power?

These monthly institute meetings are bringing out some fine discussions on subjects of vital interest to the farmers. For example, it is a fact of importance that the average farmer buys a large amount of meat in town, instead of butchering for himself. It has been said that it is too much trouble to cure the meat, and that it is impossible to keep fresh meat from spoiling. It would be hard to find a better way out of this difficulty than that used by the country people thirty or forty years ago. When one man got ready to butcher a calf, he would notify his neighbors and they would take small portions of the meat, and thus no one would have more than could be used before it would spoil. The next week another neighbor would butcher, and so on around the community.

PRINTING BEGAN HERE IN 1873.

President Anderson Founded the Department in the Blue-Print Room.

The printing department of the Kansas State Agricultural College was organized in 1873. J. A. Anderson was president of the college. Two years later, the first issue of the INDUSTRIALIST was printed. The office was in what is now the blue-print room of the engineering department. About 1881 it was moved to the women's gymnasium. It was moved to the basement of Anderson Hall in 1895. The next move was to Kedzie Hall in 1908.

The office contains the following equipment: 36 cases of six, eight, and ten point body type; 150 fonts of job type, all in series and in cabinets; three Chandler and Price job-presses; one Babcock Optimus press; one Babcock drum-cylinder press; a 32 inch power paper cutter; a hand paper cutter; two wire stitching machines; motors for all the machines and other minor apparatus. There isn't a linotype in the shop, and hardly another in the state gets out a weekly paper of 3500 circulation without one.

From the first to the twentieth of January of this year, the amount of work which has come into the printing office has been 195,175 impressions. By impressions is meant the number of sheets to be printed.

TURN ON THE WATER.

Here Are Some Men Who Made a Success with Their Gardens.

Anyone should be glad to make eight hundred dollars an acre from a small garden. C. W. Allen, of Ellsworth, did this last summer by turning the water on his cabbage patch.

While Mr. Allen was getting rich from his garden his neighbors complained because of the hot, dry weather which was killing their gardens. The water was pumped by a windmill. It was put on the patch by running it through shallow trenches, or furrows, between the rows. The cost of the irrigation was less than one hundred dollars for the season. The men who ridiculed Mr. Allen for wasting his water have decided that he knew what he was doing after all.

T. W. Faucet, of Norton, used the overflow from his stock tank to keep his garden alive during the hot months. He sold \$108 worth of tomatoes from one-fifth of an acre of this irrigated land. Mr. Faucet had about

MEN LIKE CLEAN ROOMS.

LANDLORDS SHOULD PUT GOOD SPINAL SPRINGS UNDER THE BEDS.

Have a Wide Study Table and a Big Bookcase—You Can Get More Desirable Roomers if the Lodgings Are Well Arranged.

Young men like to lodge in cozy rooms. Few women realize this fact. They suppose that all they need to provide is the room, some excuse for a bed, a little washstand, and a few hooks. "Rooms for rent" is the only advertisement they believe necessary. Vacant rooms, or rooms occupied by discontented lodgers, who will leave sooner or later, is the inevitable result. Renting rooms is a hard, business proposition. For every dollar invested in furnishings and proper conveniences, there must be a certain profitable return. Incidentally though, the householder can, and should, be considerate of her lodgers.

PROVIDE IRON BEDSTEADS.

The most important article in a bedroom is the bed. It will be no mistake to put white, iron bedsteads in the rooms. It is a good plan to provide a single—what is known as a three-quarters—bed for every renter. This is a plan young men unanimously approve, and besides, the beds are sanitary. They are easily moved about, they can be placed more advantageously in the rooms; and the occupants will sleep comfortably. Use the spiral springs. These stand long usage and are always comfortable. Woven springs soon sag in the middle. Over the springs put a fairly thick mattress, and the other necessary equipment.

one-third of an acre under irrigation

and sold about sixty dollars' worth of other vegetables. All that he did was to let the stock tank overflow every day and open the ditches occasionally.

D. A. Crist, of Quinter, sold two hundred dollars' worth of beans, peas, asparagus and other vegetables from one acre of irrigated ground, last summer.

Some of these men, who have irrigated on a small scale in the past, expect to use more of their land for this kind of work next year. What could be simpler or easier than to make \$168 by letting the water tank run over? None of the men spent more than one hundred dollars getting the water on the land. Garden truck is very easy to irrigate and the irrigation of small gardens always is profitable.

COUNTY OFFICERS WERE HERE.

J. H. Miller Invited Them to Aid in the Work of the Station.

The county commissioners and clerks of Kansas, who were holding a convention in Manhattan last week, visited the Kansas State Agricultural College. They held their meeting in the library building. At noon they took luncheon at the Domestic Science Building. The luncheon was prepared and served by the short course girls.

J. H. Miller, director of college extension, talked to the visitors in the absence of President Waters, who was to address the meeting. He asked for the co-operation of the county commissioners in several phases of college work.

He said in part: "Every county should have a county farm, managed by the county commissioners. If these farms were established in a number of counties, and the commissioners would co-operate with the Kansas State Agricultural College, valuable experimental work could be done. The college is doing all it can on its own farm but this work is not so extensive as it should be."

Mr. Miller also invited the commissioners to make use of the highway engineering department of the college for any bridge or road work they might need.

Mrs. Hinshaw Will Sing.

Mrs. Ila Hinshaw, of Chicago, has been engaged by the Choral Union to give a song recital February 2. Mrs. Hinshaw has been the soprano soloist at two of the annual Choral Union concerts.

Tipsy Cake.

Moisten any kind of plain cake with wine, cover it with rich boiled custard, and top it with an unbaked meringue with eggs beaten stiff and a little sugar. Sift a little grated cocoanut over it and serve. This is an easily prepared dainty dessert.

THE KANSAS INDUSTRIALIST

Volume 38

Kansas State Agricultural College, Manhattan, Saturday, February 3, 1912

Number 15

FOOD FOR \$10 A WEEK.

WHAT THE FAMILY WILL NEED FROM TUESDAY TO SATURDAY.

Wednesday, the Cook Can Be Extravagant and Spend \$1.21 for Three Meals — Total is \$9.45 for the Week.

This is the second and last installment of a story begun in THE KANSAS INDUSTRIALIST last week, in which a young woman tells how a family of four may be fed for \$10 a week.

Tuesday, there will be for breakfast, cereal at three cents; muffins, requiring one egg at three cents; and one-fourth pound of bacon, eight cents. The cereal may be varied every day, but three cents is enough to allow for any ordinary kind. Baked potatoes, five cents; and sautéed bananas, four, costing ten cents; with junket made from the day's milk and a one-cent rennet tablet; and gingerbread, four cents, left from the previous day's pudding, make an appetizing luncheon.

GOOD SOUP, CHEAP.

Dinner will begin with vegetable soup made from soup stock which every careful housewife always keeps on hand, and about five cents' worth of vegetables. There will be steak left from Monday to put with the cold potatoes from luncheon for croquettes; and there will be, to complete the dinner, scalloped corn, one can at ten cents, with a few crackers; glazed sweet potatoes at eight cents; and raisin pie costing six cents. This day's meals cost only sixty-six cents.

The family could be extravagant Wednesday and have scrambled eggs for breakfast, six costing eighteen cents. The cereal may be omitted and the meal completed with oranges, ten cents, and hot biscuit. Only twenty-five cents need be expended for a luncheon of macaroni and cheese, cold slaw, apple sauce, and gingerbread. The meat for dinner will be a chuck roast (four pounds for fifty cents), with brown gravy. The vegetables are baked potatoes and buttered carrots, amounting to twelve cents. The cocoanut pie for dessert will cost only six cents for the cocoanut and an egg, as everything else comes from shelf supplies. This day's expenses are \$1.21.

THE LAST "REVIEW," 56 CENTS.

Thursday's breakfast of cereal, gridle cakes and syrup will come to nine cents. The less choice portions of Wednesday's roast will be served minced on toast for luncheon, with beets in vinegar sauce, costing ten cents. Instead of dessert, there will be rice with lemon sauce, costing six cents. Part of a ten-cent can of tomatoes and some soup stock will make tomato soup for dinner. The roast from Wednesday will make its farewell appearance as cold sliced beef, with mashed potatoes, creamed turnips, and apple dumplings, all of which amount to twenty-one cents. The day's expenses are only fifty-six cents.

Eighteen cents will pay for Friday's breakfast of creamed codfish, hot biscuit and cereal. Luncheon is mostly left-overs from Thursday, and consists of scalloped tomatoes, potato cakes, stewed apricots, fifteen cents, and home-baked cookies, four cents. A dinner of browned beef stew and dumplings (from fifteen cents worth of boiling meat), with riced potatoes, creamed onions and lemon pie will cost forty cents. The total for Friday is seventy-seven cents.

Breakfast, Saturday, consisting of corn-meal mush sautéed a golden brown, with syrup and hot biscuit, will cost only six cents. For luncheon, the menu is hominy croquettes, requiring one egg; scalloped cabbage, canned peaches, and cookies, all for thirty-one cents.

Boston brown bread and baked beans is the principal part of the dinner, and with a five-cent piece of pork,

costs eleven cents. Sautéed apples seven cents, go with this. The dessert is apricot sponge, costing eight cents. It is made of the apricots left from Friday's luncheon, half a box of gelatine, and one egg. These three meals amount to sixty-six cents.

The menus for the week amount to \$6.08. This, with the \$3.37 for shelf supplies, makes a total for the week of \$9.45. There is a margin of fifty-five cents for any little article which may not have been otherwise accounted for.

WHAT THE HORSES NEED.

A Little Wheat Bran or a Bit of Old Process Linseed Meal.

A limited amount of wheat bran, or a handful or two of old process linseed meal, once a day, would save the horses that are dying in western Kansas. Even the old-timers do not seem to realize that their horses are starving to death, notwithstanding that the

ROAD DRAGS ARE CHEAP.

USED PROPERLY, ONE WILL REDUCE YOUR HIGHWAY EXPENSES.

Split a Log and Connect the Halves Together — It Isn't the Style of the Drag That's Important; it's Dragging.

Dirt roads do not cost much to build, and they can be maintained inexpensively if farmers will use drags. The important thing is not so much the style of the drag used as that some kind of a drag be used.

The best drags are made of light wood, as a light drag usually is more effective, and, if weight is desirable, the driver may ride on the drag or weight it with stones. The split-log drag may be made on the farm. The materials needed are: a log, about a foot thick and nine feet long; four 4 inch sticks, about three feet long; a

Drag the road as soon after every rain as possible, but not when the mud is in such a condition as to stick to the drag.

Do not drag a dry road.

Drag at all seasons of the year.

Always drag a little earth to the center of the road until it is raised from ten to twelve inches above the edge of the traveled way.

If the drag cuts too much, shorten the hitch.

The best results from dragging are obtained only by repeated application.

It costs from \$4 to \$10 a mile a year to drag a road.

ANY SEED TO SELL?

Tell the College, if You Have, and You'll Get Buyers.

Any seed for sale in your district? Any kind of good seed—oats, barley, corn, kafir, cane, flax? If there is, then, in the words of the typewriting

GREEN FEED MEANS EGGS

THE HENS CRAVE THAT KIND OF FOOD THESE DAYS.

Cabbage, Beets, Sprouted Oats, Pumpkins, or Green-Cured Alfalfa and Clover Are Excellent for Winter Layers, Professor Lippincott Says.

Chicken-growers often wonder why some hens will lay an egg every day when eggs are worth but ten cents a dozen and only one or two eggs a month when eggs are twenty-five cents a dozen. But this, usually, is as far as they get. Most persons blame the hen, but it is not her fault. The time of the year that hens lay best is in the spring, when there is plenty of green feed. By feeding green products in the winter you can best imitate nature and bring spring conditions to the hen. Then the question is, does it pay?

Here is what W. A. Lippincott, head of the poultry department of the Kansas Agricultural College, has to say: "Bringing green food to the hens is the same as bringing spring. Spring is the time of the year when hens lay most, and there is no doubt that it will pay.

GOOD WINTER FEED.

"Cabbage, and any of the beet family, are green feeds which can profitably be fed to chickens in winter. Green-cured alfalfa and clover, which has been steamed or boiled, sprouted oats or pumpkins also are profitable green feeds.

"Of the foregoing, cabbage and beets are the best, but a variety is advisable. Cabbage can profitably be fed in years when it is abundant. Beets and cabbage must be harvested before they start to get dry and put into a potato cellar, or buried so they will not freeze. Then when fed they may either be hung up on a nail, within reach of the chickens, or laid on the floor. It will be found that the chickens will eat all the cabbage but the core, and also the whole of the beets except the rinds.

GET SPROUTED OATS.

"Sprouted oats can be obtained with very little trouble if one has a cellar which is kept warm enough to allow the oats to germinate. The oats are soaked over night in hot water—just cold enough so the hand can bear it. Then they are spread out over the floor, or on racks, about an inch deep. Soon they will sprout; the roots will intertwine and the young plants will hang together, so that one can cut off as much as he wishes to feed at a time and carry it to the chickens.

"In feeding green-cured alfalfa, or clover, which has been chopped up and boiled, care should be taken that it is not mouldy, as mouldy alfalfa is injurious to fowls.

"When nothing else can be obtained, pumpkins make a fairly good feed, but the seeds must be removed, as they will produce digestive disorders."

AS TO FEEDING CATTLE.

The Method Depends Wholly on the Age and Future of the Stock.

The feeding of cattle depends upon the age and the future of the animals. If fed for market a liberal supply of palatable food is necessary. If for merely holding through the winter, feed the coarser, cheaper feeds. Cattle to be grazed during the summer will do the best if not turned on the grass too fat. The change of feed retards the growth. The feed that is consumed to put on this surplus of fat is lost.

Calves should have the best roughage available. There should be sufficient palatable and nutritious foods to keep them at their maximum growth until they are put on the grass. When the calves are from six to twelve months old they should not be fed the coarser feeds. A good daily gain for a calf is from one to one and a half pounds.



Learning to Cook in the Basement of Anderson Hall in 1890.

owners have plenty of feed. The whole trouble, put briefly, is caused by stomach impaction. Only quick action, the most important part of which is a prompt laxative, will save the horse.

President Henry J. Waters, of the Kansas Agricultural College, said, a few days ago, "The substance is leached out of feed grown in a long dry spell, or exposed to successive rains. This feed, therefore, is not so digestible as in ordinary circumstances. The result is an impaction of the stomach, and, frequently, death. Advices from western Kansas show that horses are dying and that the owners do not know why. An examination would show the horses' stomachs filled with a woody mass that came from the feed.

"The simplest remedy is to feed a limited amount of wheat bran, if obtainable, locally, at a reasonable price, or a handful or two of old process linseed meal, every day, right along. The horses are run down. They need building up, and this will do it. These remedies contain much nutriment, and they stimulate the secretion of the digestive organs, and so handle this woody material."

Dante's avowed aim was to show the working out of isolated moral laws; Shakespeare's subjects are men and women, each working out the tendencies of his own life; Goethe gives the developments of the single soul through all the storm and stress of circumstance.

strip of iron, four feet long, three or four inches wide, and about a quarter of an inch thick; and a stout chain about fourteen feet long.

HOW TO MAKE IT.

The log should be split, and the pieces fastened firmly about two and one-half feet apart with the 4-inch sticks. The front face of the drag should slant forward slightly and be protected at one end by the iron strip. Planks may be used instead of the pieces of the log. The chain is used to pull the drag, and power should be applied at such a place as will cause the face of the drag to be at an angle of about forty-five degrees with the direction of the road.

In dragging, the short hitch should be on the outside. This will move the dirt to the center of the road and make it higher than the sides. The center crown thus formed will drain water off readily after every rain. The drag should not be used to move large quantities of dirt. Its use is to smooth the surface when the road is soft and muddy and to move a small amount of moist earth to the center of the road.

HERE ARE THE RULES.

The following instructions for dragging are given by W. S. Gearhart, highway engineer at the Kansas Agricultural College, in a bulletin on "Highway Improvement."

Drive the team at a walk.

Ride on the drag.

Begin at one side of the road, returning on the opposite side.

expert, "Now is the time for all good men to come to the aid" of the beleaguered farmers in other sections who need the help—the information. Listen to W. M. Jardine, head of the agronomy—farm crops—department of the Kansas Agricultural College.

"A big demand for good seed will exist, soon, to plant next spring, especially in western Kansas, where conditions never were more favorable for the planting of spring crops. The agronomy department is preparing a list of farmers and seed dealers having good seed oats, barley, corn, flax, kafir, cane, etc., for sale, and is eager to get into touch with all persons having such seed. This list should be ready for distribution within the next two weeks, and will be furnished upon request to persons desiring to obtain good seed. All those who wish to list their seed with the agronomy department should send in a small representative sample and give the name of the variety, quality, and price, and the amount for sale; and, if possible, the source of the seed."

ONCE MORE, THE SCIENCE CLUB.

Another Invitation, for To-night, Sent Out by Dr. Headlee.

The postponed meeting of the Science Club, twice postponed, will be held to-night, at 7:30 o'clock, in Room 27 of the Physical Science building. "Heat As An Insecticide," by Geo. A. Dean, and "Orchard Heating," by Albert Dickens, will be discussed.

THE KANSAS INDUSTRIALIST

Established 1875.

Issued weekly during the college year by the Kansas State Agricultural College, Manhattan, Kansas.

PRES. H. J. WATERS Editor-in-chief
PROF. C. J. DILLON Managing Editor
DR. J. D. WALTERS Local Editor

Except for contributions from officers of the college or members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism, under the direction of Prof. Charles Dillon.

The typesetting and other mechanical work is done by students in the school of printing, of which J. D. Rickman is superintendent. Both these departments are in Kedzie Hall.

Newspapers and other publications are invited to use the contents of the paper freely without credit.

The increasing demand for THE KANSAS INDUSTRIALIST makes it necessary to insist upon the payment of the regular subscription price, 50 cents a year, invariably in advance. No commission is paid any one for subscriptions, and no advertisements are accepted. The paper is sent free only to the alumni, to officers of the state, and members of the legislature. This rule will not be violated.

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SATURDAY, FEBRUARY 3, 1912.

AGAIN—THE FAMILY INCOME.

One of the most interesting features connected with industrial journalism is the opportunity for expression given the students. This little piece was written by one of the girls. It contains bits of wisdom and philosophy often lacking in women twice her age.)

Granted that the average woman must spend money, just how is the family purse to be juggled to insure domestic peace? The old way, which it is now believed falls far short in this, is a sort of revised Shylock dialogue, in which the good wife approaches her lord and master with, "Father, we would have moneys." If man had been built on a more patient, generous and loving and lovable basis, this scheme might work; but some preachers, and all married women, can tell you he is only human.

It would be interesting to know if the old-fashioned "Stingy Man" ever put his wife on a strictly cash basis; if he ever figured just how much she was worth in dollars and cents. The hand that rocks the cradle, darns the stockings and does the scrubbing might be earning \$20 a week some where else as a general housekeeper. But don't give her an allowance, as you would pay the hired girl, and don't keep her on the cash basis more than a few minutes, please.

It is a labor of love on her part and that's the only labor that counts. She rocks the cradle because she loves every atom of the babe within it. She darns the stockings because she loves the one who put the holes there. She is satisfied with the results of her toil if those she cares for are made more comfortable and happy.

Because a man gets shining dollars instead of glistening glassware and shining floors, in reward for his work, has he any right to say, "It is mine to guard and keep?"

Not one man in fifty would be so close fisted as to make a woman beg or even to ask for money, if he would stop to reason it out. Just to save so much reasoning, after the inevitable conclusion is once reached, hand her a check book and watch her smile. It won't come off, either. L. B.

WHAT WILL THE SON DO NOW?

What wonderful tales you can find in the columns of 500 newspapers! What a record they form, these columns! But with all the news and all the enterprise, can you imagine any ten lines that could tell a story more filled with human interest than these lines from the "Prairie View News Page" of the Logan Republican?

John Dekker of the city of Luetor called at this office last Friday and informed us that he and his good wife would move to Iowa about the first of April and make their home with Steven Ramaker. We are sorry these early settlers are going to leave us, but wish them well wherever they may go. He has deeded his old home farm to his son Bert.

Now, Mr. Bert Dekker, it's up to you. You've taken over the old place, at last; let's see what you can do with it. Perhaps you have had chances that the father didn't have in his youth. You may have been in college, or you may have taken a short course—it's to be hoped, for the farm's sake, that you have—and you may have a better head on your strong, young shoulders.

But, whatever the conditions, don't forget, Mr. Bert, that when your father came out to Kansas, a pioneer, he had a row much harder to hoe than ever you will face. He was here when there really was something the matter with the state. Agriculture, for one thing, had not attained its present high standard. Horses shied sideways, in those days, when they met a plow, and you had to be mighty particular about approaching them—the horses—on the proper side.

Nowadays, you don't have to be a bronco-buster to be a farmer. The agricultural college is your friend in every need; the country paper—if it is managed by wise men—tells you, every week, how to do this or that, and the city paper gives you a chance to express your choice for president. Why, Bert, it's like running a department store; everything is made to order.

Here's hoping you'll get along fine, old man, and send cheerful news back to I-o-way, occasionally.

AS TO CLASS-BOOK SUPPORT.

The class book of 1911, and the book to be issued in June, this year, are so far ahead of every other similar effort that comparison, with superlatives, will be allowed without fear of offending any of the old-timers. These volumes no longer contain the silly stuff that was written years ago, an affront, in many instances. They have become books to be prized. True, the class book, every year, is more pretentious than the book that preceded it; and there are many who believe that the publications should be suspended or discontinued. The elaborate work entering into their make-up entails tasks that few young men can do, with any justice to their lessons—and these should come first.

But, since the class book is permitted, and by some encouraged; since its contents no longer insult any of its thousands of readers; since it has become a work of art with correct text, and dignity in keeping with its duty—that of representing the class of a certain year; since these things are, why not give these young men and young women the support they have a certain right to expect? The meager profits, when there have been any, in past years, never have been improperly spent. They are not likely to leave the campus in future years.

But—the boys and the girls are going away. They will be the alumni, of which every great institution is so proud. They are going out, next June, to take places in the world, to make friendships, to succeed or to fail; and wherever they go, whatever they do, they will remember the Kansas Agricultural College. The class book of 1912 will be a mighty highly prized volume in their homes.

It would be a fine idea to put into that book the material the students are so eager to put there, the material that can be supplied them with little personal sacrifice. Give these boys and girls your support. It may come back in after years. D.

A FEW WORDS FROM BRISBANE.

You all know Brisbane, of course. But, just supposing you don't, it ought to be said, right here, that Brisbane—Arthur—is the editorial person in Willie Hearst's office, in New York, who pulls down \$50,000 a year, unaided by steam, gas, man, springs, or electricity, for writing pieces. No one in this great land ever said more, in smaller space, than this Brisbane gentleman. And here are a few of his high-priced words of praise for the country editor:

"A man writing fearlessly in some congressman's or some senator's home town can do more to keep that public official 'straight' than all the metropolitan newspapers put together."

Public men know the power of the local editor and of the local newspaper. It is a pity that the business men of the country are ignorant of it. "The man who has something really worth while to advertise could, if he would use the local newspapers intelligently, multiply his sales by ten, make himself known to millions that do not know him, and put himself at

A Golden Text.

And he showed me a river of water of life, bright as crystal, proceeding out of the throne of God and of the Lamb, in the midst of the street thereof. And on this side of the river and on that was the tree of life, bearing twelve manner of fruits, yielding its fruit every month: and the leaves of the tree were for the healing of the nations.—*Revelation 22:1, 2.*

the head of his line of competition.

"If the automobile manufacturers who attract attention just at this moment would put their advertising intelligently in the local newspapers, paying a good, fair rate and offering a good value, they could very soon change the output of automobiles in America from 140,000 in one year, which was the record in 1910, to one-half million or one million in one year—and this is no exaggeration.

"If you took all the metropolitan newspapers of the United States and weighed them in the balance against the press of the small cities and towns of America, it would be as though you weighed a city office building

fore the ice breaks up in the spring. It seems to us that it is High Time to Call a Halt.

A Few Flowers for the Students.

This week's issue of THE KANSAS INDUSTRIALIST, the weekly farm paper published by the Kansas State Agricultural College, was prepared wholly by students taking the course in industrial journalism. The entire issue is business-like and shipshape. But the feature that is of especial interest to outsiders is the editorial page. Here are set forth the things that these young people, sons and daughters of Kansas farmers, are thinking about.

The leading editorial presumably reflects the policy of the department of journalism, rather than the broader interest of the school, for it shies a brick at yellow newspapers. But in the other editorials the young men and women get down to the real problems of an agricultural state.

One insists on the importance of making farm homes attractive—the house should be heated by furnace; it should have plumbing and a proper lawn. A second urges the need of modern methods in farming. There are calls for community centers, concrete bridges, general instruction in scientific agriculture, and a dissertation on "The Path of Knowledge."

KANSAS."

(Without any apologies to anyone.)

Kansas: where the seeds we sow
Almost always sprout and grow;
Where, beneath the sunny skies,
We're growing corn that takes the prize;
Where we grow hard winter wheat
At a rate no state can beat;
Where the great alfalfa grows;
Where the milk and honey flows;
Where sleek horses, too, are found;
Where the fattening swine abound;
Where the cattle, on the grass
Growing fat, bring things to pass;
Where our farmers are the kings;
Where our girls wear diamond rings;
Where our boys are temperate;
Where is such another state?
Where, O, where are such bonanzas
As we have "out here in Kansas?"

—L. V. Sanford, class of 1904, Sabetha, Kan.

against Pike's Peak—and the local press would be Pike's Peak."

BUILD STOCK YARDS.

The storms and cold weather of this winter should teach the stockmen some lessons. Kansas farmers are very lax about providing good shelter for their animals. Many stock raisers have lost animals from exposure, and more than half of the cattle of the state will go on grass in very thin flesh, because of poor care. Considerable financial loss is the result in both cases.

Every farmer should provide good shelter for all of the stock. It is a good financial investment to do so. The loss of a weaker animal occasionally is not the worst result of poor shelter. If steers, for example, go on grass in thin condition they never will make the growth they might make. It takes thin animals almost to fly time to start their growth. They will not make nearly the growth that might have been made if they had started into the season in good condition.

Stock sheds do not need to be expensive. Build some protection for your stock, it will pay in money, and in the satisfaction of treating the farm animals as they should be treated.

THE DREARY YUKON.

A copy of THE KANSAS INDUSTRIALIST, mailed to a member of the alumni in Dawson City, Yukon, last October, reached home, on its return trip, last Monday. "Unmailable in the Yukon while navigation is closed," was stamped upon the wrapper. It is not our business where the paper has been for more than three months. The point is that no reliable farm intelligence can get into Dawson City be-

fore the showing is mighty creditable. If the editorial page represents fairly the views of the undergraduate body at Manhattan, Kansas is training up a generation of scientific managers who will revolutionize rural life in that state.—*Editorial in The Star, January 27.*

The copy of THE KANSAS INDUSTRIALIST prepared by the students is a little gem, showing that the young people have had excellent training. I want to congratulate you and the editors of this particular issue. I trust that the success of this issue is sufficient encouragement to you and all concerned to continue in the work of teaching industrial journalism. To my mind, it ought to be one of the most satisfactory parts of the work done at the Kansas Agricultural College.—Clarence A. Shamel, editor *Orange Judd Farmer*, Chicago, January 29.

The paper gotten out by the boys last week was a good one; in fact, it seemed to me to be rather above the average, and I read it all. The boys are to be commended, not only for what and how they did, but also for the things they didn't do, that so often tempts the pen to regretted efforts.—W. E. Blackburn (Regent), Anthony, Kan., January 28.

THE KANSAS INDUSTRIALIST, organ of the agricultural college, compared with the same publication a few years ago is a good index of the really wonderful progress of that progressive institution of Kansas.—*Topeka Capital.*

A cure for hiccoughs is to take a long breath and hold it as long as possible.

A Fragrant Memory.

BY EMMA A. LENTE.

We heard the call of quails amidst the clover; We saw the white cloud-fleeces drifting over; We felt the sweet wind blowing in our faces; And found that earth was rich in charms and graces.

That summer day.

We put aside our fret and care and worry. And loitered as we pleased, undriven by hurry. The babbling brook told us its happy story. The western sky blazed up with sunset glory. That summer day.

But now the leaves lie drifted by the hedges. And fields are gray with withered grass and sedges; The dim clouds threaten snow; no bird-song thrills us. No wayside fruit or flower with pleasure fills us. That winter day.

—*Farm Journal.*

SUNFLOWERS.

Experience is one of the best teachers and scientific agriculture is mighty good experience.

We happen to have proof that any kind of a yap may have rheumatism. It takes money to support gout.

Beauty may actually be only skin deep, but all men, even the wisest, demand exactly that shallow attribute in women.

Only one kind of mud slinging should be tolerated in Kansas. That which becomes necessary in building good roads.

An advertisement in the Kansas City Star, recently, recorded the loss of a "green lady's hand bag." Another knock on rural visitors.

City Gardener.—No; we have never advised anyone to plant electric bulbs in the late fall. It is better to wait until the currents are picked.

T. W. Faucet, of Norton, saved his garden, last summer, by irrigating it. Doubtless he turned all the little Faucets on the patch at the right time.

Boys and girls like light and laughter. Usually it is quite late in life before they show much preference for the subtleties of half lights and pathos.

The first agricultural extension lectures in the United States, possibly in the world, were delivered in 1842 in New York state. They were provided by the State Agricultural Society.

"How to Pack a Trunk," was the assignment given a girl student, a few days ago. She told the story in less than one-half a column by leaving out a list of the 7661 articles a woman usually packs.

One of the honorable regents said, in an honorable letter, recently, that last week's issue of THE KANSAS INDUSTRIALIST was "better than the average." This is one of the compliments you can play both ways from the middle.

"K. S. Smick, editor of the Wamego Reporter, was in town between trains, to-day," said the much revered Mercury, a few nights ago. But there's such a distance between trains, in Manhattan, that Smick doubtless escaped uninjured.

This paper, it should be understood, must not be held responsible for the absurd report, in a country weekly, that we have urged "all farmers to butcher themselves." We have done nothing of the kind. What we said was that farmers should do their own butchering.

The Gove County Advocate comments, this week, on the fact that many "fragile" young men couldn't, possibly, get to school during the recent prolonged visitation of excessively unpleasant climatic disturbances. But not one young woman teacher in any of the surrounding districts missed a day. "The weaker sex, indeed," sniffs the Advocate.

How Henry George must turn, now, in his long, quiet sleep if, perchance, upon the other shore he hears and knows that, tardily, the country is giving thought to his single tax theories! Victoria, B. C., has adopted the system, and Kansas City, Mo., is "fixing" to do it. Now if the libel law would clear his name from the unhallowed associations suggested in the affluvia of an atrocious cigar, the George family might feel that, after all, the world is not so cold.

TO MAKE HER DEN COZY.

A GIRL'S ROOM SHOULD BE FURNISHED TASTEFULLY.

By the Use of White Enamel Old Furniture and Woodwork Can Be Made Attractive—No Carpet in a Sleeping Room.

A girl's room should show individuality. It should be so daintily furnished and arranged that one would know, at a glance, that it belonged to a girl. A young woman student at the Kansas Agricultural College describes this way to make a cozy room for a girl:

For sanitary reasons, a sleeping room should never be carpeted. The floor should be finished, and covered either with one large rug or a few smaller ones.

HELLAC WILL DO.

Where expense is an important item, shellacked floors are very satisfactory and have the advantages of being easily prepared and cleaned. Shellac varnish is made by dissolving six ounces of flake shellac in one pint of grain or wood alcohol. It is best to buy the materials and mix them yourself to avoid adulteration. The gum will dissolve in about an hour and be of the proper consistency for the floors. The varnish will dry in less than an hour, and it makes a very hard surface. It is best to strain through a cheese-cloth before using. All varnish should be applied with long, slow strokes of the brush and with the grain of the wood.

To obtain good results in a room, a color scheme should first be decided upon. For a girl's room, blue is very appropriate. The wall paper should carry out this color scheme. Wall paper having forget-me-nots, or the small, blue flowers commonly called daisies in it, would be pretty for a blue room.

THE GIRL'S FIXINGS.

The furniture necessary is a bed, dresser, and washstand if there is no bathroom. To these may be added an easy chair and a few favorite books with a bookshelf.

A very attractive room can be made with a white enamelled iron bed, which is neat, cheap, and sanitary, and white enamelled furniture. If one has no dresser, a table or box surrounded by a curtain, with a mirror suspended above it, will make a pleasing substitute. A pretty, serviceable washstand can be made in a similar way.

For the curtains one can buy scrim for 15 or 20 cents a yard, frequently finding one with a border harmonizing with the color scheme. Even cheese-cloth makes a very dainty curtain where one cannot afford the other. If a curtain is used around the "dresser," it should be the same as the window curtains. A cover for the bed of the same material as the curtains, and a few good prints, will complete a very dainty room, and all with little expense.

ALUMNI NOTES.

Roy Coleman, '11, is ill at his home in Denison, Kan.

V. D. Peachy, '09, visited friends around college recently.

Miss Carrie Gates, '10, is teaching domestic science in the Labette county high school.

The board of regents met, Monday, in Topeka. President Waters attended. The second day's meeting was in the president's office at the college.

Fred Hulse, '93, is superintending foreman for Rogers and Kaiser, Chicago contractors who are building the new Carnegie library in Clay Center.

F. W. Krotzer, '11, has left his student apprentice work with the Westinghouse Electric Company, of Pittsburgh, Pa., and has taken up work with the Western Electric Company, of the same city.

Miss Marie Williams, who was graduated from the domestic science department in 1909, has been successful in teaching. After graduation she went to teach in the Washington High

School, at Portland, Ore. She is now at the head of her department. She receives \$1200 a year.

The Central Baptist, last week, contained an article by L. H. Beall, assistant professor of English literature in the Kansas Agricultural College, on "The Understanding of Biblical Allusions."

Miss Lucy Needham, '11, who is teaching domestic science in the Presbyterian College at Oswego, Kan., visited around college last Saturday. She was accompanied by several of the students from her department.

Charles Myska, '11, has been awarded a fellowship by the E. J. Dupont-DeNemours Company, of Wilmington, Del. His work will be the determination of the effects of blasting on the productivity of the soil.

P. V. Kelley, '10, writes from Denver, Colo., that he is interested in a real estate business in that city. He says he frequently meets ex-students of the college and that Henry Overholst, who works in an architect's office in Colorado Springs, does not fail to call when he comes up to the metropolis.

R. N. Newland, '06, and Miss Marie Hofmaster were married in York, Pa., January 6. They are living in Brooklyn, N. Y. Mr. Newland is employed by the York Manufacturing Company, of York, Pa. He is superintendent of the erecting department of the New York district. He succeeds L. A. Ramsey, '06, who is now superintendent of the engineering department of the Shipley Construction and Supply Company. This firm is the New York and foreign agent for the York Manufacturing Company.

Henrietta W. Calvin, who for four years has filled the chair of household economics at Purdue University, will leave in June to become dean of women and head of the domestic science and art courses in the Oregon State Agricultural College at Corvallis. She is a graduate of the Kansas State Agricultural College of the class of 1886. She has a national reputation as a domestic science authority. Before going to Purdue she taught for seven years in the Kansas State Agricultural College.

The graduates and former students of the Kansas Agricultural College living in the Pacific Northwest were invited by Mr. and Mrs. E. P. Smith and Mr. and Mrs. H. A. Darnall to assemble at the spacious suburban home of the latter, near Portland, Ore., for a reunion the evening of December 28, 1911.

About thirty responded to the invitations, most of whom live in Portland, and a most enjoyable time was spent by all in getting acquainted and in recounting events of college days. Mr. Darnall, as leader, announced two old familiar college hymns, which were sung by all. C. A. Haulenbeck spoke of "The Days of 1861;" H. W. Stone of "The Days of Auld Lang Syne;" Dr. E. C. Joss of "The Kansas Girl." Mrs. Ada W. Ingalls gave some piano selections which were much enjoyed.

Those present were: Harry W. Stone, '92, Mrs. Harry W. Stone, H. A. Darnall, '92, Maud (Kennett) Darnall, '95, E. P. Smith, '95, Mabel (Cotton) Smith, '96, V. E. Emrick, '95, May (Willard) Emrick, '95, E. C. Joss, '96, Miriam (Swingle) Joss, '96, L. P. Keeler, '99, Mrs. L. P. Keeler, James G. Arbuthnot, '04, from Corvallis, Ore.; O. N. Blair, '04, George A. Moffatt, '08, Ward Woody, '09, Mrs. Ward Woody, Miss Marie Williams, '09, Mrs. Ada (Williams) Ingalls, S. M. Ransopher, '11, Mrs. S. M. Ransopher, C. A. Haulenbeck, student in 1863-'64; John Haulenbeck and Mrs. Haulenbeck, Frank Haulenbeck and Mrs. Haulenbeck, H. H. Tracy, student in '97-'98; Walter Givens, from Estacada, Ore., student in '01-'02; Mrs. (Holcome) Waldele, student in '94-'96; F. A. Waldele, the Misses Murial, Dorothy, Winnifred and Mabel Smith.

There may be some things that money won't buy, but one can't think of them at a moment's notice.

WHEN EGGS ARE COSTLY.

BE A BIT ECONOMICAL WITH YOLKS AND WHITES NOW.

This Rare Commodity Having Reached 45 Cents the Exact Dozen, a Motion to Substitute for the Egg is in Order.

Eggs, 45 cents a dozen! And, as a famous Frenchman said, "they are a necessity so indispensable that the most skillful cook must renounce his art if the use of them was forbidden him." It is a matter of dollars and cents to the woman who can use eggs economically now.

The housewife who tries can be very careful in using eggs in cooking. Most women use a whole egg in making coffee, but if the shells of eggs are ground they answer the same purpose. The shells can be dried, ground and kept in a jar so as always to be ready for use. One tablespoon of ground shell answers the purpose of an egg. The ground shells also may be used for clearing soups or for cleaning bottles and jars in which it is impossible to get a cloth or brush. They are also used for scouring pots and pans. It is a waste to throw away eggshells.

SAVE THE WHITES, TOO.

A great many recipes call for more eggs than are necessary. The recipe for mayonnaise dressing calls for only the yolks of the eggs, which usually means that the whites will be put aside in a dish to be used some other time and consequently forgotten. There is no need for this wasting of the whites, because the white egg answers the same purpose and then only one-half as many eggs are needed.

In making custards, more eggs usually are used than necessary. A recipe for a custard calls for four to six eggs, which are used to thicken the custard. But if cornstarch is used for the thickening and one or two eggs are used for coloring, the result is the same. In the same way cornstarch, instead of eggs, may be used to thicken pumpkin pies.

Economy in the kitchen, though it be only to save an egg, is a part of the instruction girls studying domestic science at the Kansas Agricultural College receive. But the instructors are not extreme in their teachings. The girls are not required to count the beans or anything like that. Economy, the students are told, does not mean stinginess. But a saving in small things, when practicable, amounts to a good deal, eventually.

HOW MANY FOR YOU.

Eggs may be saved by mixing them with other foods. In cooking eggs for breakfast for a family of six, it takes from six to ten eggs. A substitute may be made by making a stiff white sauce, adding four chopped hard-boiled eggs, and serving it on toast. This not only furnishes the same amount of protein as the usual number of eggs, but is appetizing.

A great many eggs are wasted in making cakes. The recipe for angel food cake calls for whites of eleven eggs; but there is a mock angel food which requires the whites of only three eggs, and it looks and tastes the same as the real angel food. The recipe is: Two cups of sugar, two cups of flour, one-half teaspoon salt, three teaspoons of baking powder sifted fine four times, one cup sweet milk, one cup of cream heated to the scalding point in a double boiler. Pour over the other ingredients and beat until smooth. Fold in carefully the stiffly beaten whites of three eggs. Bake in a very moderate oven.

There also is a recipe for an eggless cake, which is very good: Cream together one cup of lard and one cup of sugar, then add slowly a cup of sour milk, stirring thoroughly. Sift together, three or four times, two cupfuls of flour, add one teaspoon of cinnamon, ground cloves, and one teaspoon of soda. Then stir in one cup of raisins and bake slowly.

There is a cake made with apple sauce and no eggs which is very delicious, too. Use one cup hot unsweetened apple sauce, one teaspoon soda, one-half cup butter, one cup sugar,

two cups of flour, and spices. It is a foolish idea that it takes lots of eggs to make a good cake.

The greatest economy in the use of eggs is to buy them when they are ten and twelve cents a dozen and preserve them. There are different ways of preserving eggs: packing in salt, packing in sawdust, or greasing the shell with some fatty substance. All these preserves are used to keep the bacteria from going through the porous shell of the egg and causing decomposition. Putting eggs into cold storage is a good way to preserve them, but this method is not usually so handy for the housewife as some other.

WHAT MR. GEARHART SAID.

Not Necessarily a Rap at All County Commissioners.

Some bridge companies have had a monopoly of the business for years in certain Kansas counties. A local contractor had no show to get in. When it becomes necessary, W. S. Gearhart, state highway engineer at the Kansas Agricultural College, says he will tell who is who. Mr. Gearhart has given out a statement, signed, intended to correct the impression, unfortunately created by some papers, that the highway engineer had called all county commissioners "influenced" or improperly controlled. Here is Mr. Gearhart's statement:

"A number of articles have appeared in the papers in regard to an address on bridges and culverts I made before the Kansas State Good Roads Association at Emporia, January 17. The correspondent evidently misunderstood my remarks. To correct the wrong impression I beg to submit the following statement:

"I said, in part, that there is a large number of counties in Kansas in which one bridge company has done all the bridge work for years, and that local contractors had little show of getting work in one of these counties because the company that had been doing the work would make its bids with little profit or below cost, rather than let local contractors have it.

"I said, also, that approximately two million dollars was expended annually in Kansas for bridges and culverts, and about one million of this amount was wasted and squandered due to ignorance, poor materials, lack of skilled supervision, bad design, no specifications, pooling, a conflicting, obsolete and, in many respects, vicious bridge law, which makes it almost impossible to let a contract legally.

"Note both the township and county culverts and bridges are included in the foregoing figures."

PROPHETS WITHOUT HONOR.

A Few Weather Items Clipped from Many Pages During the Recent "Spell."

Looks now like we are in for another spell of weather.—Towanda Items.

Two weeks more of solid winter and the roads almost impassable for a barefooted horse.—Champion Hill.

About the next thing on deck will be that old farce about the ground hog and his shadow. When that is past we always feel that springtime, gentle Annie, is on the way.—Logan Republican.

John Vey has gone to Texas and he may stay. So much weather has him about bluffed on this state.—Champion Hill.

The weather has warmed up and the snow is almost gone. People can get out once more and unwrap their frozen noses and ears.—Cactus Items.

It thawed a bit last Saturday and Sunday and a few spots of earth are visible. It seems nice to step out without freezing once more.—Champion Hill.

With the thermometer at 25 below zero, some mornings, we are still alive. B. VanWyck pulled out of here, Tuesday, for Iowa.—Sanford Pointers.

Jelly Dressing.

One tablespoonful arrowroot dissolved in one-quarter cup of water, or teaspoonful gelatin dissolved in the consomme; put away to harden.

FRIED CHICKEN FOR 100.

DOMESTIC SCIENCE GIRLS SERVED A DINNER TO VISITING ENGINEERS.

The Menu Also Included Potatoes and Gravy, Turnips, Hot Biscuits, Fruit Salad, Ice Cream and Blackberries, and Coffee—Thirty-three Speakers.

A dinner, cooked and served by Kansas girls, was served to 100 members of the Kansas Engineering Society, one day last week, when that body was in session at the agricultural college. If the engineers ever had eaten anything better they appeared willing to deny the fact at the end of the meal when Mrs. Mary P. VanZile explained to them, upon request of President Waters, that the meal was served as a demonstration of what Kansas girls are learning to-day in the Kansas Agricultural College. The menu included fried chicken, mashed potatoes and gravy, turnips, hot biscuits, fruit salad, ice cream and blackberries, and coffee.

600 GIRLS ARE ENROLLED.

A more enthusiastic crowd would have been hard to find than the engineers when they discovered that the meal had been cooked in the little individual kitchens adjoining the dining room, by students, and served by students. Mrs. VanZile told them that the domestic science course now has 600 girls enrolled. One hundred fifty-five of these are taking the six-months' housekeepers course. The others are in the regular four-year course.

The third annual meeting was called to order Tuesday afternoon by Prof. William C. Hoad, engineer for the State Board of Health and professor of civil engineering in the University of Kansas. Professor Hoad is president of the society. President Waters then formally welcomed the visitors to the agricultural college. F. O. Marvin, dean of engineering at the University of Kansas, responded.

"The society represents a new spirit in Kansas," Dean Marvin said. "The determination of scientific men, notably engineers, is to give better public service and to realize better ideals. Kansas people," Dean Marvin said, "have shown in recent years the best possible feeling toward technical education, and particularly in evincing a desire to have their public work done in the scientific manner by men who thoroughly understand that work."

VARIED SUBJECTS DISCUSSED.

The many subjects discussed by the thirty-three speakers show how varied are the phases of engineering employed in Kansas. Here are some of them: Paving, road-making, bridge-building, drainage, irrigation, sewer-building, water-ways, flood protection, and power engineering. These subjects were discussed by the leading engineers of the state.

The society elected these officers for the next year: President, R. V. Leeson, Topeka; vice-president, J. M. Meade, Topeka; secretary-treasurer, W. S. Gearhart, Manhattan; directors, W. C. Hoad, University of Kansas; H. A. Rowland, McPherson. The choice of a meeting place for the next annual meeting was left to the executive board of the society, which consists of the president, vice-president, secretary-treasurer, and four directors.

The Y. M. C. A. Minstrel Next Week.

The second annual minstrel show of the Young Men's Christian Association will be given in the college Auditorium, February 7. The minstrel this year will include a farce by the college Glee Club and athletic drills by the Y. M. C. A. gymnasium classes.

Why Did Allen Sneak?

The entertainment, Monday night, was a fake. Allen came in on the train and for some unknown cause slipped out of town without saying a word to anyone. The management prepared the hall and kept the audience waiting for some time before disbanding them.—Beverly Tribune.

PUPILS NEED FRESH AIR.

FEW RURAL SCHOOLS ARE VENTILATED PROPERLY, HOLTON SAYS.

Of 500 Visited Last Year, Not One Had a System for Airing the Room Properly—What the King System Is.

Ventilation in rural schools is very much neglected. In 500 rural and village schools visited last year by E. L. Holton, professor of rural education at the Kansas Agricultural College, not a single house was found with a method of ventilation. Professor Holton says he made a careful note of the fact that teachers, like persons in sleeping rooms, connect ventilation with heating problems. If the room becomes too cold they build up the fire and if it is too hot they open the windows and let in the cool, fresh air. But these are two different problems. The first thing to do is to ventilate the room and then put in more coal and heat it. In this way a more even temperature is maintained and plenty of fresh air supplied at all times.

BUT NO DRAUGHTS.

The purpose of ventilation is to remove the impure air given off by respiration and replace it with fresh air, and to do this without causing draughts. Proper ventilation will add greatly to the attention of the pupils as compared with that of pupils in school rooms of ordinary construction. The expired air contains considerable carbonic acid gas, a small amount of oxygen, and small quantities of poisonous organic matter. This impure air collects at the bottom of the room, and unless a means is provided for its removal, it will prove injurious to the human organism.

There are two methods of ventilation—the natural and the artificial. The first is the one found in most of the rural schools in Kansas at present. It depends for its operation upon the diffusion of gases and the air currents formed by the difference in temperature of different bodies of air. The only means provided for a system of this kind are the doors and windows of the building. This method of ventilation is satisfactory in warm weather when the doors and windows may be opened without danger of causing cold draughts, but when building new schoolhouses or remodeling old ones it is better to provide for some other means for proper ventilation.

PROF. KING'S WORK.

An extensive study of the ventilation problem has been made by F. H. King, formerly professor of agricultural physics at the University of Wisconsin. In a recent book—"Ventilation for Dwellings, Rural Schools and Stables"—he has described the best methods of ventilation for rural schools. He says the motive power utilized in ventilation is the passing wind, heat generated by lights and fires within the space to be ventilated, rotary fans driven by mechanical means, and steam jets or coils in ventilation flues. The wind and the heat generated by fires are the only means that are practicable for rural schools.

To have the right condition, says Professor King, the rural schools should have thoroughly warm floors and a moderately warm atmosphere which is rapidly and continuously changed. To obtain these ends it is necessary to have the heater in the basement and allow none of the air which comes in contact with it to become a part of the air supply. To maintain a circulation, flues must be built in the wall or elsewhere for the removal of the foul air and for the entrance of the fresh air.

The best method of removing the foul air is to make a chimney of suitable size from wrought iron pipe or boiler tubing. This should occupy the center of a ventilating shaft made of galvanized sheet iron. The ventilating shaft should extend nearly to the floor and have an opening at the bottom for the entrance of foul air. The air entering the shaft at the floor becomes warmed by the heat from the smoke flue and is forced out at the top,

thereby drawing in fresh air from the outside and keeping a constant circulation in the room.

When the stove is in the school room it should be surrounded on three sides with a metal shield, opening towards the door to cut off direct radiation from the pupils. The smoke flue should rise through the roof, and should be enclosed by a ventilating flue, as in the former case, ending at one side of the metal shield.

The fresh air should enter the ceiling, having the outside opening in the flue near the ground, and the opening into the room over the heater, in order that the fresh air will mingle directly with the warm air in the room; or

Prosperity in Poultry.

Poultry raising is an avenue of independence for farm women.

In many instances they have entire charge of poultry on the farms. Figures show that they have a revenue of more than 150 million dollars a year—a big mathematical fact.

The poultry industry is in its infancy. Furthermore, it is growing steadily. Every modern farm should have a poultry connection, because there is money in it.—*Farmers' and Drovers' Journal*.

flues may be built through the roof into the room, providing an air trap is placed at the bottom of the flue to prevent the escape of the warm air from the room. When the heater is in the school room the fresh air may be let in beneath the floor and up under the heater and inside the shield. Registers, or dampers, should be provided in the flues to regulate the air currents.

COLLEGE RECEIVES \$20,000 GIFT.

Mrs. Mehitable Wilson, Who Died Recently, Was the Giver.

Twenty thousand dollars has come to the agricultural college from the most unexpected source. President Waters was notified, last week, by the Old Colony Trust Company of Boston, that this amount had been willed the college by Mrs. Mehitable C. C. Wilson. The money is to be for a building to be erected under the direction of the regents and to be known as Wilson Hall. Or it may be added to the present endowment fund of the college, as the regents may desire. It is more than likely that a dormitory for girls will be suggested by the regents, although the will makes it possible to use the money for any building called Wilson Hall. It might, for instance, be used for a thoroughly modern restaurant, which is already being planned for student use.

Mrs. Wilson died only recently. She was the widow of Davies Wilson, a large owner of the original site of Manhattan. The family lived in this city many years ago.

Hashed Brown.

Four medium-sized potatoes cooked and chopped very fine, four tablespoons of cream, three-quarters teaspoonful salt, half teaspoonful pepper, a little onion chopped fine; put two heaping tablespoonfuls of butter in a spider and turn gas low, so as not to scorch; put potatoes in and cook moderately slow. Turn when brown. Serve with parsley.

Disappointment?

Louis Roser, a farmer living near Maysville, Ky., dropped dead of heart disease, recently, when his wife asked him, at the dinner table, if he would have a cup of coffee. The wife had been a mute for twenty-five years and had not spoken a word in all that time.—*News Dispatch*.

If everybody, like notes, were taken at face value, what a number of "protests" there would be.

REAR HOOTHOUSE LAMBS.

IT'S A PROFITABLE BUSINESS AND THE RETURNS ARE QUICK.

In a Warm Building the Lambs are "Crowded" and are Ready for Market in Two Months—How to Butcher.

A farmer living near a city should rear hothouse lambs. It is profitable if he has a good market. Hothouse lambs can be turned on the market in a short time; the danger of loss by disease is reduced to a minimum; capital isn't tied up for several months, and the business is profitable.

A hothouse lamb is born late in the fall or early winter, usually November or December. Its growth is "crowded" so it will be fat enough for market at two months, and weigh 45 pounds. The demand is strong after Christmas, and continues until warm weather. A later lamb will sell as quickly as the hothouse product, but the heavier the lamb the lower the price.

IT'S A BIT COSTLY.

Hothouse lambs retail at 35 to 40 cents a pound. A fat young lamb weighing 45 pounds will dress about 25 pounds. In preparing the product for market it is "hog dressed," bled out thoroughly, and all of the exposed surface is covered with clean muslin. Three lambs are placed in a light crate and burlap is tacked over the top. They should be shipped by express or refrigerator freight. Attention to details is the secret of success.

In butchering the lamb it is suspended from a tree or pole about six feet from the ground. An artery in the neck is severed. As soon as struggling has ceased, the head is cut off. Then the lamb is opened from the tail to the neck and the intestines and the stomach are removed. The heart, liver and lungs are not taken out if the butchering is done in the early part of the season. To bring the best price the product must be fat and the carcass attractive.

Warm buildings should be provided for the ewes and their lambs. A lamb that once gets chilled isn't a paying proposition as a hothouse product. The ewes must have plenty of food to supply sufficient milk for the young lamb. The food should be rich in protein, to produce the protein in the milk. It is the protein that builds the bone and muscle of the growing lamb. To maintain the milk flow a ewe should be fed a ration much the same as a dairy cow. Bran, oil meal, ensilage, and alfalfa hay are good feed stuffs. The ewe mustn't be permitted to get "off" her feed.

THE DORSETS PREFERRED.

A careless shepherd can upset the most carefully laid plans in sheep husbandry, and the hothouse lamb industry isn't an exception. A shepherd, to be successful, must be kind to his charges, keep the feed troughs clean, feed the flock at regular hours, and look after the health of the animals.

For the rearing of hothouse lambs Dorsets are preferred by many. A Dorset has the correct size, constitution, and vigor, and produces an abundance of milk for the young lamb. The more milk the quicker the lamb goes to market.

THESE MACHINES SAVE COAL.

The Economizer and the Condenser Prevent a Waste of 2100 Tons Annually.

Enough coal is saved every year by the condenser and the economizer at the college heating plant to heat about 130 average-sized houses a year. The two machines, working together, save about 2100 tons of coal annually. With coal at the present high price, this means a saving of thousands of dollars a year.

It takes about ten tons of coal a day to run the steam turbine that turns the dynamos which furnish electric lights and power for the college. The condenser, used in connection with the turbine, cuts the amount of steam required to run the turbine nearly one-half without decreasing its power. The condenser condenses the steam after leaving the turbine and returns

--- Let Me Have Your --- Wasted Hours

Possibly YOU think YOU do not waste any. Just keep tab for four days and you will be surprised. The average man wastes more time in ten years than he would need for getting a college education. Why should any man remain ignorant of the great field of **Agricultural Science?**

Study at Home

The Kansas Agricultural College offers courses by correspondence in more than TWENTY SUBJECTS relating to AGRICULTURE and HOME ECONOMICS. It employs a Director of Instruction whose business it is to direct the methods of teaching by correspondence and to develop ways of giving instruction to those who are not able to attend College.

Courses Are Offered In--

Elementary Agriculture, Farm Crops, Soils, Stock Feeding, Poultry, Farm Dairying, Butter Making, Fruit Growing, Vegetable Gardening, Floriculture, Landscape Gardening, Drainage, Concrete Construction, Road Making, Elementary Woodwork, Farm Buildings, Cookery, Sewing, Household Management, House Sanitation, Vocational Education, Rural Sociology, Animal Breeding, Forestry, Injurious Insects, and several others.

SEND FOR SPECIAL PAMPHLET.
LET ME HAVE YOUR WASTED HOURS.

Director College Extension, Box G.

**Kansas State Agricultural College,
Manhattan, Kansas**

it to the economizer at about 90 degrees F. Water running into the economizer from the outside is usually at about 60 degrees F., thus making a difference of 30 degrees.

The economizer is a series of tubes in which water circulates on the inside while the heated gases pass around the outside, heating the water. It is located so that the heated gases pass through it before going up the flue. These gases that leave the boiler are heated to about 500 degrees F., and before the economizer was brought into use they were wasted. Now they pass through the economizer and heat the water to about 250 degrees before it goes into the boiler.

NOW SHE'S MRS. JAMES BLAIN.

Miss Josephine Finley, Formerly of this College, Married in Corvallis, Ore.

Miss Josephine Finley, daughter of Mrs. Martha E. Finley, was united in marriage to James W. Blain, of Monrovia, Cal., at a quiet home wedding this afternoon at 2:30 o'clock. The happy event was solemnized at the home of Mr. and Mrs. A. E. Ridenour, 644 South Third street, the Rev. J. C. Rollins officiating. Only immediate relatives witnessed the ceremony.

Following congratulations and a dainty luncheon the happy couple left for San Francisco, en route to Monrovia, where they will reside.

They have the sincere good wishes of the Corvallis friends of the bride.—*Corvallis (Ore.) Gazette-Times*.

Miss Josephine Finley was the first stenographer and secretary employed in the department of industrial journalism when it was founded, in September, 1910. As a graduate of the college she was especially valuable,

not only for her proficiency, but for her large acquaintanceship on the campus.

COTTONSEED MAY POISON STOCK.

Don't Feed the Meal to Horses in Large Quantities.

It is not safe to feed large amounts of cottonseed meal to horses for long periods. It may be fed in limited amounts for the concentrated portion of the ration. For the best results, do not feed more than one pound a day for every 1000 pounds of live weight. Do not feed this ration for more than six months at a time.

"There is a poison in cottonseed meal," says C. W. McCampbell, assistant in animal husbandry at the Kansas State Agricultural College, "which has a cumulative effect. It causes no trouble until a certain amount has collected. If fed beyond this point death will take place."

The poisonous effect of feeding cottonseed meal for long periods is not confined to horses. Its effect upon cattle and hogs is the same.

THE FARM WORKSHOP.

Many Hints and Helps for the Busy Farmer.

It is hard to estimate the value of the shop on the farm.

It is the place where many hours are spent that otherwise might be thrown away, or even worse than thrown away.

The room should be well lighted and of such size as to accommodate a portable forge, two sets of trestles, and a long workbench with two sides to it.—*New York World*.

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Number 16

BE A TOP NOTCHER, SON.

GET INTO THE "LARGER CORN YIELD" CLASS AND WIN REWARD.

Ten Thousand Hustling Men and Boys Can Improve the Crop Report of this Grain—Here Are the Agricultural College Rules.

Probably the greatest corn campaign Kansas ever has had is just starting. Every man or boy in Kansas who will agree to try to raise more corn this year than ever before is eligible to join the "top notcher" club. The agricultural college is calling for 10,000 "top notchers." Hundreds have already responded. Entries must be made before April 1. The final limit for entry for prizes will be next fall when the farmers' institute meets in every county.

AS TO LIMIT.

To be a "top notcher" a man or boy must grow more corn this year than a prescribed limit set by some local organization which has in charge the boosting of the club. In certain parts of the state these limits will be smaller than in the better corn-growing sections. For instance, the limit in Doniphan county, where yields are large, might be 75 bushels to the acre, while in some of the western counties of the state the limit might be as low as 40 bushels an acre.

J. H. Miller, director of college extension at the agricultural college, started the campaign. He believes that a lot of good, healthy rivalry injected into the corn-growing communities this year would result in better corn yields. And it not only would make the boys in these communities more interested in getting larger yields, he says, but it also would stimulate interest among older corn growers.

SCHOOLS CAN HELP, TOO.

Mr. Miller suggests that the school officers of every school district—rural school—fix the limit that a "top notcher" must exceed and let the teacher get the name of every boy who will agree on or before the first of April to strive to be a "top notcher" for a single acre of corn and for five contiguous acres. Then let this teacher take the name of every farmer who will enter the competition for a five-acre plot. Let every teacher report to the county superintendent the names and addresses of boys and girls and men who will join the "top notchers" club. Every county superintendent should publish the list for the county. One list should be sent to the agricultural college. If the college can have the names, it will help with bulletins, suggestions, and personal letters. Mr. Miller says he would like to get two hundred letters a day about the scheme.

To make the campaign a big success, coöperation on a large scale will be necessary. The agricultural college has asked the help of county superintendents, rural school officers, farmers' institutes, granges, farmers' unions, anti-horse thief associations, commercial clubs, merchants, bankers, farmers—everybody interested in the agricultural welfare of Kansas.

SKY PILOTS STUDY FARMING.

Back to the Soil for the Future Preachers in Emporia's College.

EMPORIA, February 10.—The college of Emporia declares it is the first and only denominational college in Kansas offering a course in agriculture. That professional men and women should have some knowledge of farming seems to be the idea of the new curriculum recently prepared in the college. A course in agricultural botany is being offered which will do its class-room work almost entirely out-of-doors.

A large class in the "farmers'

course" already has been organized, and the preliminary work of studying seeds and their germination has begun. As soon as the weather will permit, practical out-door work will begin, and for this purpose about three acres on the college campus will be gotten into shape for planting and studying crops.

In the spring a large group of forthcoming preachers and preachers' wives may be seen on the college's farm with spades and hoes cultivating their gardens, or culturing the campus trees and shrubbery in the first departure from college classical learning in the state.

TO FIGHT BEET PESTS.

A Bug Experiment Station to be Established at Garden City.

An experiment station for bug work in western Kansas is to be established at Garden City. F. B. Milliken, assistant state entomologist, will be in charge of the work. The United States Sugar and Land Company and the Kansas Agricultural College have coöperated to make such a station possible. A study of methods of controlling insects injurious to sugar beets will be the principal work of Mr. Milliken. But in addition to this he will conduct experiments with general insect pests common to that section of the state.

Western Kansas has felt for some time the need of experimental work with insect pests, particularly those that damage sugar beets. In that part of the state sugar beets are the principal crop. The United States Sugar and Land Company has large holdings of land near Garden City. This land is leased to tenants. The sugar and land company buys sugar beets from the tenants and also from neighboring beet growers. Most of the experimental work with sugar-beet insects will be done on the land of this company. Mr. Milliken will have the coöperation of Dr. C. O. Townsend, consulting agriculturist for this company, who formerly was an expert chemist with the United States Department of Agriculture.

The establishment of an entomological experiment station in western Kansas is another step of the agricultural college to help the farmers of that section. Near Garden City the agricultural college has an experimental farm of 320 acres on which is carried on experiments in dry-land farming, principally. The United States Department of Agriculture coöperates in this work. Because of a large annual damage in that part of the state by insect pests, Dr. T. J. Headlee, state entomologist at the Kansas Agricultural College, has been eager to extend insect investigation work to the western farmers.

ARE YOU LEFT-HANDED?

If You Are, Your Ancestors Didn't Fight Very Much.

Most persons are right-handed. Only one in every twenty is left-handed. Why are people right-handed? They may have been born that way, it is true, but why?

Away back in the beginning the chief occupation of man was fighting. In battle, he carried a shield in one hand and a weapon in the other. It was not much work to carry the shield, but the quick action required by the hand and arm which did the fighting soon developed that arm. It also developed the nerves and the half of the brain that governed the right side of the body. Those who shielded their left side—thus protecting the heart—were the ones who usually came out victorious. Down through the ages this selection continued, the right hand gradually becoming more proficient.

DON'T TAKE DAD'S MONEY

A GIRL CAN EASILY SUPPLY HER OWN PURSE AT HOME.

One that Lived in a House by the Side of a Road Sold Tea and Cakes to Motorists—Rich.

Many country girls earn their own spending money. So can you. Think it over. Take the responsibility from your father of furnishing you with spending money. Because he is willing to do it is no reason that he should be allowed to do it. Be independent; earn your own spending money.

Organize a girls' home economics club in your community. The work would be very interesting, and not hard to do. The girl who organizes the club could charge a fee for membership and for the lessons she gives. The girls in the neighborhood would become interested in this work and take hold at once. In this way you would have a large income from the work—all the spending money a girl would need—before you realized what you had done.

SELL THEIR SEWING.

Not only the organizer of the club could make money by this home economics club, but also the members of the club. By following out the directions in the lessons for sewing, cooking, or whatever it may be, the girls could sell what they made. Especially in sewing, every article could easily be sold in the community to mothers who do not have time to do their own sewing. Hand sewing always sells high.

You ask, "How could one girl understand the work well enough to organize a club?" Take the correspondence course as sent out by the Kansas Agricultural College. In this course sixteen lessons are given in any of the six subjects taught. The course includes three subjects at a time, or only two, as the student desires. The subjects offered for girls are: Cooking, two courses in sewing, house sanitation, household management, and home decoration. If you take only the one course, including the cooking and sewing, you have interesting subjects for your club. You would not have to buy new material for the club girls; use the lessons you had in your course, and in this way save expenses. It takes only a little preparation, and it would furnish money for yourself, and also the other girls. Besides, you are giving others a valuable education, which no girl should neglect to get if she can. In other words, you are doing much good for others.

BUT THERE ARE OTHERS.

But this isn't the only way country girls can earn spending money. A girl who lives on a main-traveled road—a motor car road, for instance—could easily earn money by keeping a tea room. This has been tried by many girls and is always a success. Travelers are certain to patronize your room, and your income will increase almost before you know it.

Some girls do not like household duties, but would rather have outside work. If you are that kind of a girl, poultry will provide a good occupation for you. It is a profitable, pleasant and healthful business for girls, especially for a girl who desires an income of her own and yet wishes to remain at home where her business and home duties harmonize. Farm girls have the advantage of city girls in this line, as they have free range for their birds and a variety of food at first cost. Also, fowls gather a great deal of their own living while on the range, and balance their own rations.

To begin right and continue right is the secret of success in the poultry business. There is more money in

eggs than any other branch of the fowl business. When you have a good flock of pure-breds, it is a good idea to let the public know what you have for sale by the judicious use of printer's ink. You should have letterheads and envelopes printed, showing the kind of fowls you have and their merits and show records.

Another occupation for girls who like outside work is gardening. This takes thought and care the same as other lines, but if managed in the right way it is a good occupation for girls to make their own spending money. If a girl lives close to a city, she could keep a greenhouse. If she did not want to do this, there is a profit in flower gardening.

FUTURE FARM WRITERS.

An Article in Collier's Weekly Tells of the Work Boys Are Doing.

The man who writes for the farm papers, reporter or editor, must have the farmer's viewpoint. He must understand—or at all events he should understand—agriculture, horticulture, dairying, forestry, irrigation, and all the other numerous and exceedingly interesting departments that make up the weekly or monthly farm publications. Unless a man is educated in these departments of learning, it is useless for him to attempt to write about them. If his clothing never has been soiled by sitting on the plowed ground, he cannot with sympathy and understanding, write about it.

The successful farm paper must be written by educated farm writers. Where are they to come from? There are schools of journalism in the universities, but these produce only students whose determination it is to engage in city newspaper work. The majority is from the farm or from the small towns, and only too many are bound toward the city and impatient to be gone. In the Kansas State Agricultural College, at Manhattan, something is being done to offset this tendency. This is the work of a new department organized there wholly for the teaching of industrial journalism.

The successful writer is the man who can take the heavy, prosaic discussions of farm questions and present them in an attractive and readable form. Very few people care to read much on these subjects unless they are briefly, clearly, and cheerfully presented. This the young students in the Kansas Agricultural College are learning to do. Every morning, six mornings a week, they are assigned to the several buildings or departments of the college with instructions, as in a great newspaper office, to get a certain kind of "story." Everything possible is done to awaken their imagination, the hope in this direction being to bring out new and original ways of writing, particularly of introducing a subject. Statistics are prohibited, unless absolutely necessary, and then totals and not details are given. Assignments rich with human interest are arranged for the students. They are taught carefully which part of a "story" should be first, so that it seldom is necessary, even after only a few weeks' instruction, to put the bottom of their article at the top.

—From Canadian Edition of Collier's Weekly, December 16.

College Women "At Home."

Invitations have been issued by the women of the college for an "At Home" in the Domestic Science and Art Hall, Tuesday night, February 13, at eight o'clock. It is desired by the committee that those who cannot be present kindly send reply to Box 207, college post office.

Add a teaspoonful of turpentine to the water in the boiler when boiling clothes. It will whiten them.

YES, WE SPELL POORLY.

BUT IT'S THE FAULT OF THE LANGUAGE, BEALL SAYS.

For Example, in English There Are Thirteen Ways to Spell the Long Sound of "O"—What's a Child to Do?

"There is no way out of it; we users of English are poor spellers," said L. H. Beall, assistant professor of English literature, a day or two ago. "No one having knowledge of real conditions will deny this for an instant. The public school teacher, the college instructor, the editor, the businessman, the casual observer of the written composition of others—all admit this to be the truth.

"Second, other things being equal, we spell less accurately than those using other modern languages, German, for example. This is a fact beyond dispute.

A CONSTANT REPROACH.

"Third, it cannot be denied that education, even that of the high school and the college, furnishes no guarantee against faulty spelling. The spelling of the college graduate, as of the high school graduate, is a constant source of reproach to the institution from which he hails; whether justly so remains to be seen.

"Why should the American spell less accurately than the German who has had no better educational advantages? The answer lies, not in the fact that German methods of teaching the art of spelling are superior to ours, but in the fact that native German words are spelled precisely as they are sounded. In this respect the German language is practically ideal, for the last silent letter has now gone almost entirely out of use.

"When a German schoolchild has been taught the rules of spelling, it is perfectly reasonable for his teacher to expect him to spell correctly any native word that he may hear pronounced. What a vision of paradise would open before the English teacher and the English schoolchild if the same thing could be said for the English language!"

SOME FINE PUZZLES.

There are, practically, no rules for the spelling of English words, Professor Beall said. The dilemma of the foreigner learning English is suggestive. He learns to spell *you, y-o-u; woo, w-o-o; do, d-o*. How is he to spell *crew, through, hue*, and a dozen other words having exactly the same vowel sound, but spelled in nearly a dozen different ways?

Superintendent Maxwell, of the New York City public schools, has recently called attention to the fact that in English the long sound of *o* is represented in thirteen ways; viz., *so, boat, roe, door, oh, soul, though, low, owe, yeoman, sew, hautboy, beau!* Here is just the difficulty. There is no official and accepted spelling for most of the sounds of the English language.

"If, then, sound is no indication of the correct spelling of words," the professor continued, "and if there is no body of rules that may be taken safely as a guide, is it any wonder that we cannot spell with any high degree of accuracy, even after we have 'been to college?'" In the last analysis spelling resolves itself into a matter, not of reason, or, in a broad sense of the term, of knowledge, but of memory and habit. This places the responsibility for inaccurate spelling, not with institutions, but with individuals.

"If correct spelling is a matter of memory and of habit, we have at once the key to the whole situation. The hopeless speller is he who tries conscientiously, but who has no memory for it. The careless speller is he who has the memory, but who has never expended the time or effort necessary to form correct habits of spelling."

THE KANSAS INDUSTRIALIST

Established 1875.

Issued weekly during the college year by the Kansas State Agricultural College, Manhattan, Kansas.

PRES. H. J. WATERS Editor-in-chief
PROF. C. J. DILLON Managing Editor
DR. J. D. WALTERS Local Editor

Except for contributions from officers of the college or members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism, under the direction of Prof. Charles Dillon.

The typesetting and other mechanical work is by students in the school of printing, of which J. D. Rickman is superintendent. Both these departments are in Eddie Hall.

Newspapers and other publications are invited to use the contents of the paper freely without credit.

The increasing demand for THE KANSAS INDUSTRIALIST makes it necessary to insist upon the payment of the regular subscription price, 50 cents a year, invariably in advance. The price to subscribers outside the state is seventy-five cents a year, in advance. No commission is paid any one for subscriptions, and no advertisements are accepted. The paper is sent free only to the alumni, to officers of the state, and members of the legislature. This rule will not be violated.

Entered at the post-office, Manhattan, Kan., as second-class matter October 27, 1910. Act of July 16, 1894.

SATURDAY, FEBRUARY 10, 1912.

ONCE MORE: CO-OPERATION.

An association to be known as the Farmers' Elevator Company is in the process of organization. Shares are being sold to farmers in the Kelly neighborhood. If enough shares are sold the company will purchase F. W. Kasl's elevator and retain Mr. Kasl as manager of the company. Their object is to get the top price for their grain.—*Kelly items in the Seneca Courier-Democrat.*

The only way these farmers will get the highest price for their grain will be for every mother's son of them to sell that grain to the Farmers' Elevator Company. This kind of an organization is no novelty in Kansas. There is no doubt, either, about the reason for so many failures.

ROBBING THE SOIL.

The landlord farmer who inserts in the lease a clause which compels the tenant to conserve the soil fertility, says the Chicago *Farmers' and Drovers' Journal*, is getting a good lease even if the rental by the acre is reduced a few points below that of other rented land in the vicinity which is operated by a careless tenant.

Preserving the fertility of the owner's land is not only doing him a good turn, but it helps the renter's profits as well.

The soil is the first thing to be considered in drawing up a farm lease.

Where the lease provides for a proper treatment of the soil and a long term to a good man, both parties will get better returns and the soil will be richer in the end.

The farm landlord who makes a short lease will get nothing for soil improvement.

The United States wheat crop, which averages 13.7 bushels to the acre, is grown on 50 million acres. In several countries of Europe land which has been farmed a thousand years produces 26 bushels an acre.

The European soil is no better than ours, but is maintained in better condition than in Illinois and most other states of the union.

THE ALUMNI ABROAD.

The alumni of the Kansas State Agricultural College gives the institution adequate representation abroad. Nearly every country in both hemispheres has one or more of its graduates, and, judging from the addresses on the mailing list, all are holding responsible positions. A great many women of this college are abroad and are at some of the most distant places. One has her mail directed to Mersivan in Asia Minor, and below it is noted "via London, Turkey and Constantinople." Another is in the Transvaal in South Africa, and still another is in Naples, Italy. They are in Porto Rico, Japan and China, and in Paris, either permanently or as visitors.

As a rule, the men are employed in some line of agricultural work, while some are with engineering plants and others represent American concerns in foreign lands. Some of the graduates are on the islands, several being on the West Indies. Closer home, in

England and Ireland, are found more, while in Mexico and Canada are more than all the other graduates taken together. They are scattered from northern Yukon to the southern part of Africa and in almost every continent on the globe.

TOOTING HIS OWN HORN ONLY.

Once there was a Man who went Marching down a Road blowing two horns. First he blew several long Blasts on his own Horn, a large, Cumbersome thing that he had Blown so Persistently that few Persons Paid much Attention to it. When he put his Lips to the Smaller, Newer Horn, however, Everyone Turned and Smiled.

Several Travelers, accustomed to Pass along the Road used by the Horn Blower, Noticed, one Day, that he Carried only one Horn—the Old, Cumbersome Affair upon which He had Blown for so Many Years.

"Why, now," Demanded one of the Travelers, "how Comes it so, Mr. Horn Blower? A while back you Blew upon two Horns, but now you Have only the one. What Say you, Mr. Horn Blower?"

"That Snappy, little Horn that Attracted so much Attention belonged to a Very Dear Friend of mine," the Horn Blower Explained, His Face Flushing to the Roots of His Hair. "So many Persons liked the Blasts from his Horn that It looked as if I'd have no Time to Blow my own. And as I didn't believe that would Be Fair to my Very Dear Friend I decided not to Blow his Horn again. Now, you see, if anyone Wants to Hear his Horn in Operation he must go to my Very Dear Friend's country and Listen. As for Me, I shall Blow my own Horn in the future and try to hold the crowd."

THE VALUE OF BOOKS.

If country boys and girls would purchase a good book or magazine, instead of going to some cheap amusement, when they come to town, they would soon have a rich store of knowledge, culture, and amusement. They would soon form the habit of reading, an invaluable asset on a rainy day or when illness comes.

Reading good books lays a substantial foundation for school work, gives wholesome recreation, stimulates intellectual activity, brings a realization of the deep, true religious life, and inspires right motives. If a person reads good books he becomes familiar with the greatest minds of the world. He comes to know the people who wrote and unconsciously strives to become like them. A person constantly reading good literature rarely stoops to low acts of crime. The best literature does much to mold the character of the true man or true woman.

Literature opens to the secluded person the field of history, science, religion, music, and art. It teaches a deep, sincere appreciation of the good and the beautiful in life.

What are good books? Good books are those which best express some phase of human life and appeal to the best spirit in man. A few of these books suitable for a library are:

Stanley Weyman's historical novels, Muehlenbach's historical novels, Alcott's works, Scott's "Ivanhoe," The Leather Stocking Tales, by Cooper, the Henty books for small boys, Shakespeare's works, current fiction by Howells, Wright, Wister, Doyle, Garland, and others of that class. Mark Twain's and Nye's works lend humor. Poetry can be supplied by James Whitcomb Riley, Whittier, Longfellow, and others. A good encyclopedia and dictionary are invaluable. And rather than stock up on science, begin with such magazines as the "Technical World," "Literary Digest," "Country Life in America," "World's Work," "Review of Reviews," the "Youth's Companion," "Saturday Evening Post," and the "Country Gentleman." Later, when funds and a relief from the work of the farm allows, get some works on science, and other purely educational books. With these for a start, a person could soon build up a library of rare value.

THE COUNTRY GIRL.

If improvements in the methods of doing women's work on the farm increased as rapidly as they do in men's work, there would be fewer unhappy, discontented girls. A girl needs a room of her own, where she can retire when she feels the desire for solitude, and be free from all intrusion. Every

A Golden Text.

Blessed is the man that heareth me, watching daily at my gates, waiting at the posts of my doors.—Proverbs 8:34.

girl has the instinct to "fix up" and put a "woman's touch" to things; she should have free rein to do this in her room. This will be the starting of her education in home decoration.

Fixed hours is another need of a farm girl. Working at all hours soon takes youth and life out of her, so that work, instead of being a pleasure, becomes a daily grind. In the city, after a certain hour girls are off duty and free from care. Why not on the farm?

Hundreds of farmers have dynamos nowadays to help in the work at the barn. If they would turn the power into the house, or get a new dynamo and light the house with electricity, it would save much unnecessary work with lamps and be a more satisfactory light. This power applied to cooking, churning, ironing, washing, and to modern conveniences for the kitchen labor, would free the girls from much

"fixings," or for books, and will be happier for it. She will, also, be less likely to go to the city to work.

V. W.

Farmers of Forty Centuries.

The secret of tilling the soil with increasing fertility for more than four thousand years is interestingly told by Prof. F. H. King in "Farmers of Forty Centuries." The volume is based on the personal observations and experiences of Professor King in his travels through China, Korea, and Japan. The average book of travel is uninviting, but Professor King has succeeded in telling a true fairytale of intensive agriculture. In this volume he has contributed valuable scientific data concerning conservation of soil fertility, economy of time, effective utilization of space, and the prodigality of labor, in these Oriental countries. Readers of Professor King's "The Soil," and "The Physics of Agriculture," will be glad to read another contribution more attractive in style, though none the less scientific, than the earlier productions of the author. "The Fuel Problem," "The Utilization of Waste," "Rice

The Little Red Ribbon.

The little red ribbon, the ring and the rose! The summer time comes and the summer time goes— And never a blossom in all of the land As white as the gleam of her beckoning hand!

The long winter months, and the glare of the snows: The little red ribbon, the ring and the rose!

Dreams only are true; but they fade and are gone. For her face is not here when I waken at dawn;

The little red ribbon, the ring and the rose!

Mine only; hers only the dream and repose.

I am weary of waiting and weary of tears, And my heart wearies, too, all these desolate years.

Moaning over the one only song that it knows:

The little red ribbon, the ring and the rose!

James Whitcomb Riley.

SUNFLOWERS.

New York, it is announced, owes \$1,037,811.718. There is absolutely no cents in such a debt.

The fire in the powder house at Belton, Mo., was intended to keep the dynamite from freezing. It did.

Norway has appropriated 1 million dollars "to found a navy." They can't get one white chip for that amount.

The fact that Manhattan's new baseball leader is an aviator should not be taken as showing a preference for flies.

We see "be the paper" that short term notes are much in demand. That is our situation exactly. The demand is oppressive.

It might be a good idea, this month, to have a poll, and settle, once for all, which is the more popular: Dickens or Thackeray.

And, speaking of the large vote for Scattering, isn't that a rather cheap way to keep from printing the names of Favorite Sons?

If the news editor of the Iola Register would just change his Gas City head once or twice, life would again seem worth living.

Have you never noticed that all the concert 'cellists—pronounced "chelists"—and the pianists—pee-annisssts—were favorite pupils?

The "Census of the Willows," mentioned in *The Star*, Tuesday night, did not refer to the Willows on Main street, near Twenty-seventh. That would be of national interest.

William Watson came from England with poems specially composed for the Dickens celebration in Boston. Was this the same Watson who handed the yen hok to Sherlock?

Men who carried water to a dead engine near Dighton, not long ago, received \$2 each from the Santa Fe. They ought to be glad the section foreman didn't have them arrested for trespassing.

And now Kimmel has gone and lost himself. Burns and his little dictograph will not be used in this case unless Kim should try to collect again on the old policy.

The Washington *Herald* figures that more than a million women will vote for president in the states that have conferred that right upon them. To our notion this is merely increasing the returns for Scattering.

A farmer in Indiana wrote *The Star* that he had a new son who would vote for Bryan in 1933 if he should be running for anything. If there's anything to run for in 1933 W. J. will be sure of one vote, anyway.

The Kansas City court of appeals awarded \$1500 judgment to a farmer who had been knocked down by the station agent at Grand Pass, Mo. This is not enough pay for that sort of treatment—at Grand Pass.

King George is home from India, and his abject subjects welcomed him as "A jolly good fellow." They might have asked George about the starving "good fellows" he left behind him in India, lookin' lazy at the sea.

"Through College on a Cow," says a facetious editor, writing a headline for the story of Maid Henry, a college cow whose produce would be sufficient to buy a young man an education. Rough riding, perhaps, but better for the boy than making the journey on a "pony." [This is almost exclusively for certain students.]

LINCOLN.



ND NOW the martyr is moving in triumphal march, mightier than when alive. The nation rises up at every stage of his coming. Cities and states are his pallbearers, and the cannon beats the hours with solemn progression. Dead, dead, dead, he yet speaketh. Is Washington dead? Is Hampden dead? Is David dead? Is any man that was ever fit to live dead? Disenthralled of flesh, and risen in the unobstructed sphere where passion never comes, he begins his illimitable work. His life now is grafted upon the infinite, and will be fruitful as no earthly life can be. Pass on, thou that hast overcome. Your sorrows, O, people, are his peace. Your bells and bands and muffled drums sound triumphant in his ear. Wail and weep here; God made it echo joy and triumph there. Pass on.

—Eulogy by Henry Ward Beecher.

dirty, disagreeable, hard work. Girls should have a share in the responsibility of managing a house rather than be sent out to milk the cow, care for the chickens, or feed the pigs.

The intellectual needs of a girl, especially if she be educated, must be satisfied if she is to be contented and happy. Fixed hours for work would give her time for music or art, as she elected. She would have time to devote to the school and improvement of the education of her less fortunate companion. Books, magazines, papers, and a library give her opportunity to satisfy the desire for reading and to keep informed on the events of the day.

The proverb "all work and no play" can be aptly applied to girls on the farm. Every one needs recreation, change of occupation, and time to spend as fancy dictates. This refreshes the mind and body and increases the efficiency of the individual.

Woman's greatest mental needs are society and religion. The rural church improved and made to meet the college girl's requirements as to light, decoration, and music, will amply satisfy her craving for spiritual comfort. Clubs, societies, musicals, an occasional trip to the city or to the opera, with other forms of social intercourse intermingled with the usual corn-husking or quilting bee, add to the joy of the young folks.

If a girl has an allowance, even if it be pay for her work, she will not feel less independent than the city girls. She will spend it in travel (a much needed form of education), social pleasures, clothes, in her room

Culture in the Orient," "Soil Culture," "The Tea Industry," "Tramps Afield," are some of the topics treated in the seventeen completed chapters of the book. It is to be regretted that Professor King died before he wrote the eighteenth chapter, entitled in his plan, "Message of China and Japan to the World." An interesting feature of the book is his proposed plan for agricultural reciprocity between America and the nations of the East. He suggested that it would be better for America to exchange courtesies with these eastern countries through groups organized for agricultural investigations rather than by means of athletic teams. Publisher, Mrs. F. H. King, Madison, Wis. Price, \$2.50.

Handbook of Nature-study.

Nature-study has been ineffective in the public schools because "the teachers are, as a whole, untrained in the subject." To remedy this condition, Miss Anna Botsford Comstock, lecturer in nature-study in Cornell University, has prepared a well-written and finely illustrated "Handbook of Nature-study for Teachers and Parents." The volume contains more than nine hundred pages of illustrative lessons dealing in a fascinating manner with animal life, plant life, earth, and sky, as related to human life. Miss Comstock has produced a complete, usable and sensible volume in the field of nature-study. The Comstock Publishing Company, Ithaca, N. Y. Price, \$3.25.

Money may be filthy, but a little dirt now and then is relished by the best of men.

CEMENT POSTS ARE BEST

AND THEY COST ONLY ABOUT TWENTY-FIVE CENTS APIECE.

They Add Permanent Value to a Farm and Will Last Indefinitely—Wire is a Good, Cheap Re-enforcement for Concrete.

Concrete posts add permanent value to farm property, and will last indefinitely. They can be made at a cost of 22 to 25 cents a post, including materials and labor.

An ideal post should fill the following requirements: Low first cost, strength, and should be resistant to the effects of water, frost, and fire. After two or three years' use, wood posts possess only one-third to one-half their original strength—catalpa posts excepted—while a concrete post will grow stronger with age.

MADE IN GANGS.

A square post 5 by 5 by 84 inches is an all-around economical design. Wooden forms may be used for this design at a reduced cost. They should be made in gangs of six posts each. Details of post design or form construction for any particular design may be had by writing to C. F. Chase, assistant in farm mechanics at the Kansas Agricultural College.

It is unnecessary to use expensive core reinforcements for concrete posts. Wire is just as good for that purpose, and reduces the cost of the post. Wire reinforcement spacers may be bought on the regular wire market. Pairs of number eight wire or twisted number twelve wire, ready strung with spacers, also are on the regular wire market. At least six wire reinforcements, with ends bent back, should be used to a post.

SAND MUST BE CLEAN.

A clean grade of sand and pebbles only should be used in a ratio of two parts sand to four parts pebbles. If a clean grade of sand or pebbles is not available, a good grade of either may be easily washed. Dirt in sand weakens concrete. A good test for dirty sand is had by filling a fruit jar to the depth of four inches and adding water until nearly full. After shaking thoroughly the mud will settle on top of the sand. Sand containing more than one-half inch of dirt in this test should not be used.

If unscreened "bank run" gravel is available, it should be used in the proportion of one part cement to four parts of gravel. For crushed rock or screened gravel, the concrete should be used in proportion of one part cement to two parts sand and four parts of gravel. Definite amounts of water should be used, which may be determined after a few trials. Portland cement is especially recommended for post making.

ALUMNI NOTES.

Miss May Umberger, '07, is teaching domestic science in Porto Rico.

Miss Carrie Harris, '10, of Valentine, Neb., visited the college last week.

F. H. Schreiner, '10, is working for the Morgan Engineering Company, at Memphis, Tenn.

Miss Sarah Hougham, '03, has accepted a position as librarian in the University of Illinois.

Miss Marcia Turner, '06, who is teaching in the Manhattan city schools, visited classes at college last week.

Miss Esther Wilson, '10, who has been visiting friends in Washington, D. C., for the past month, is expected to return to Manhattan to-night.

Miss Retta Womer, '04, who is teaching agriculture at Belleville, Kan., will bring her class of boys to the oratorical contest, February 17.

Van Smith, '10, and Miss Margaret Haggart, '05, took part in the program of farmers' institute week at the Colorado Agricultural College last month.

E. C. Gardner, '04, now of Talent, Ore., was a caller at the college Tuesday. He is now superintendent and

one of the directors of a company which has planted 160 acres of orchard at Talent, and the company contemplates increasing the acreage. Talent is eight miles south of Medford, one of the best-known orchard sections of the West.

Miss Winifred Cowan, '11, is going to West Virginia to take up extension work. Miss Alma Levengood, '10, will go to Holton, Kan., to fill the vacancy caused by Miss Cowan's resignation.

E. H. Hodgson, '03, writes concerning work in landscape gardening. He is preparing to improve the appearance of his place. He adds a postscript that he "is very well contented with the farm."

Dr. Joseph Faber Johnson and Mrs. Johnson of Washington, D. C., have announced the engagement of their daughter, Margaret Faber, to Earl Wheeler of that city. Mr. Wheeler was graduated in electrical engineering with the class of 1905, and is now general manager of the Electric Speedometer Company of Washington. The wedding is expected to take place early in May.

D. E. Linden of Osborne, Kan., sophomore in 1892, writes that the last twenty years have been good ones for him. Until a few years ago, he says, he practiced the principles of agriculture acquired under Georgeson, Popenoe and Mason to a considerable increase of his bank account, but owing to the failing health of his wife, he has for the last few years been in Osborne in the general mercantile business.

John Frost, class of '92, writes that he has bettered his condition considerably by the sale and purchase of farms, and that he is now within three miles of Blue Rapids, Kan., on a farm that gives him a fine view of the Blue river. He has named it, from that fact, Bluevue Farm. The letterhead on which he writes shows that he raises Polled Durham cattle, Duroc Jersey hogs, R. C. Rhode Island Red chickens, Boone County White corn and Kharkof wheat; that he is an institute worker. Institute fairs have found that his practice squares up with his preaching, and that he is one of the most thorough and most successful farmers in that one of Kansas' best counties.

DON'T BE TOO SKIMPY.

Buy a Little Good Furniture Rather Than Many Cheap Pieces.

Don't waste in one place and skimp and be stingy in another when you buy supplies.

On staple articles, like sugar in large sacks, or canned goods by the crate, one can save. But be wary when anything is marked uncommonly low. Frequently a crate of canned goods is sold very low, and then it is discovered that one-half or more of the goods is unfit for use. Also, never buy over-ripe fruit or vegetables, since they are not only unhealthful but there is sure to be much waste. In buying fresh fruit or vegetables, one is taking no chances. Never buy an oversupply of fresh fruit and vegetables.

When furnishing a house, it is wiser to purchase a few good, substantial pieces than to buy several cheaper pieces. Particularly avoid furniture that is covered with scrolls and carving.

It is impossible to keep such pieces attractive looking, for they are simply traps for dust. This is the advice of domestic science instructors at the Kansas Agricultural College.

In buying cloth, it always pays to get good quality. The extra expense will be more than repaid in the greater wear and satisfaction derived from it.

If one is a good judge of materials, one frequently can find a bargain at a cloth sale. But too often the goods offered at sales are shopworn, faded, or have dropped threads.

A farmer at Kewanee, Ill., has received forty-five applications to lease his 200 acres of highly productive land at yearly rentals ranging up to \$8.00 an acre.—*Drovers' Journal*.

MORE FOOD IN CHEESE.

STEAK COSTING 50 CENTS WON'T DO ONE-HALF SO MUCH GOOD.

Properly Cooked and Served, this Product Should Be the Main Part of a Meal—Soufflés and Fondues.

Twenty-five cents invested in a pound of cheese will buy as much real food as fifty cents spent for steak at twenty cents a pound.

Cheese is nearly one-third protein—the tissue-building element of food—and one-third fat, which is a source of energy to the body. Taken weight for weight, beef furnishes a little less than one-half as much nourishment as does cheese. The mild, American cheeses give greater food value for the price than do the more highly-flavored foreign brands.

Comparatively few housewives realize the value of cheese as a meat substitute. They will serve it with apple pie or with wafers and coffee as the last course at dinner, but they seldom think of making a cheese dish the main part of a meal.

LEARN HOW TO COOK IT.

Many persons, in fact, consider cheese highly indigestible, but this is mainly because they have not learned the proper methods of cooking it. High temperatures make cheese tough, stringy, and difficult to digest. Lower temperatures may be secured by cooking cheese in a double boiler, or by setting the pan containing a soufflé or other cheese dish in a pan of hot water when it is put into the oven to bake.

Breaking cheese into very small pieces, or grating it, and mixing it with a starchy food such as macaroni, makes it more digestible. A very small amount of bicarbonate of soda added to cheese in cooking makes it more soluble and hence easier to digest.

There are many ways of serving cheese. It is very good grated and added to scalloped rice, or to scalloped potatoes. Cheese soufflé or fondue, with salad, and a simple dessert, makes a very nourishing luncheon. A delicious omelet is made by adding a tablespoonful of grated cheese to a plain omelet mixture and sprinkling the finished omelet with a little more of the grated cheese. Here are several ways of preparing cheese which are used successfully in the domestic science department of the Kansas Agricultural College.

HERE'S SOMETHING GOOD.

Cheese Soufflé.—Melt 2 tablespoonfuls of butter in the double boiler. Stir in 3 tablespoonfuls of flour, and when well mixed add gradually $\frac{1}{2}$ cup of scalded milk. Stir in $\frac{1}{2}$ cup of mild, grated cheese, $\frac{1}{2}$ teaspoonful of salt, and a few grains of cayenne. When the cheese is melted, remove from the fire, and add the yolks of three eggs, beaten till lemon-colored. Beat the egg whites stiff and dry, and fold into the cooled mixture. Pour into a buttered baking dish, set the dish in a pan of hot water, and bake twenty minutes in a slow oven. The soufflé must be served at once.

Cheese fondue is much similar to soufflé, the difference being that more milk is used and a cup of bread crumbs is added to the mixture.

English Monkey.—Soak 1 cup of stale bread crumbs in 1 cup of scalded milk for fifteen minutes. Melt 1 tablespoonful of butter in the double boiler, and add to it $\frac{1}{2}$ cup of soft, mild cheese cut into small pieces. When the cheese is melted add the soaked crumbs, one egg, slightly beaten, $\frac{1}{2}$ teaspoonful of salt, and a few grains of cayenne.

Cook three minutes and pour over crackers or bread toasted on one side. The mixture should be poured over the untoasted side of the bread.

SCIENTISTS TALKED ABOUT HEAT.

Dean and Dickens Discussed the Value of It to Millers and Orchardists.

Considering the temperature last Saturday night, two very appropriate subjects were discussed at the Science Club meeting. They were "Heat as an Insecticide," by G. A. Dean, assist-

ant professor of entomology, and "Orchard Heating," by Albert Dickens, professor of horticulture.

Professor Dean showed that a temperature of 120 degrees for a few hours would kill almost any household pest. The heating should be done in the summer, as it is then easy to heat the building to the required temperature. Professor Dickens in discussing orchard heating explained the use of the various wood, coal, and oil heaters. He said that a lard can was nearly as good as any of the patented oil heaters. The value of a heater, he said, depended on the surface exposed and not on the number of patents on the heater.

WOMEN SHOULD KEEP BOOKS.

System is as Necessary in the Home as in Any Other Business.

In every household there should be some system of account-keeping. The necessity of keeping accounts is recognized by every one in the business world. It is just as necessary in the business of housekeeping to have a record of the income and outgo and to be able at any time to check up receipts and expenditures. That, at least, is what students in domestic science at the Kansas Agricultural College are taught.

Keeping household accounts usually falls to the lot of the housekeeper, because she is the one who is best acquainted with the household affairs. She should be willing to devote a certain amount of her time to keeping the accounts accurately and neatly. It is sometimes more convenient, and at the same time good training, for some other member of the family to keep accounts.

For household account-keeping some system is necessary. This may be simple, but ought to be complete enough to give an accurate record of the receipts and expenditures. The books needed are a journal and a ledger, for the itemized account and for the classification of accounts.

Entries should be made daily and accounts should be balanced at least once a month. If slips are sent with goods, they should be kept for reference, and for comparison with bills. All receipts should be kept at least a year to avoid errors.

It is well to have a balance sheet made out for the year. At the end of the year it can be compared with those of previous years to see whether more economy must be practised or whether the balance is increasing from year to year.

It should be possible at any time to check up the accounts to see exactly where affairs are standing. There is no reason why a household with a business-like system of keeping accounts should not be successful.

EIGHT ORATORS THIS YEAR.

The Annual Intersociety Oratorical Contest is to be February 17.

The annual intersociety oratorical contest will be held February 17 this year. There will be eight orations, the Browning Society having been admitted to the association last fall. The orators are: R. I. Davis, Webster; Neva Colville, Eurodelphian; Mildred Inskip, Ionian; Oscar Levine, Athenian; William Marshall, Franklin; Merton Cozine, Alpha Beta; E. O. Graper, Hamilton; and Evalyne Bentley, Browning.

The first and second prizes have been increased and a third prize added by the board of control. The first prize will be \$25 and a gold medal; the second prize will be \$10 and a silver medal; and the third prize will be \$5 and a bronze medal.

Clarify Coffee.

One egg will clarify two pounds of coffee. Separate the white from the yolk and beat until a stiff froth is formed. Stir the coffee into this with a brisk, firm touch until every bean has been coated. Then spread on a large platter to dry.

Before putting the coffee into its tin, place the platter in the warming oven that the beans may regain their crispness.

THEY SEARCH FOR LEAKS

STUDENTS IN BUSINESS CLASS LEARN TO STOP FARM WASTES.

A Study of Local Business Conditions and Economic Problems Will Be Made—A Farmer Who Didn't Use a System Failed.

In this high-pressure age no business can succeed which permits the slightest waste. There must be no leak. To aid in the practical study of this theory, the students in Prof. J. E. Kammeyer's class in business organization are investigating local business conditions. The economic problems confronting the college and Manhattan will be studied. Business organization is a subject recently added to the curriculum as an elective for engineering students.

The subject of business organization is one in which every business man should be intensely interested. And in these modern times the man who runs the plow should be just as good a business man as the one behind the counter. It has been demonstrated in countless instances that the loss of time or material, so small as to have escaped notice for many years, has been costing the business hundreds and perhaps thousands of dollars every year. Take a case such as this: A man had a fine farm, got good crops and sold them for good prices. The family lived well, and yet he was unable to save any money. One day a friend of his who had made a study of just such conditions for many years came to visit him. The first thing that attracted this expert's attention, even before they had reached the house, was an unsightly pile of old farm machinery. Located less than one hundred yards from the house, this eye-sore seemingly had escaped the notice of the owner. And he was unable to see why he couldn't make money. The visitor had discovered the leak. This farmer was spending too much money for new machinery. There were half a dozen plows in that heap which needed absolutely nothing but cleaning and sharpening. The farmer had left them standing in the open, year in and year out. By the way, is this an unusual case?

BETTER BE VACCINATED.

A Little Trouble Now May Save You Later on from Typhoid.

Every student in the Kansas State Agricultural College now has a chance to be vaccinated for typhoid. This vaccination has been made inexpensive for the students. The state has agreed to furnish the vaccine free and the doctors of Manhattan have consented to perform the operative work.

Prof. T. J. Headlee says, "All the students are required to do is to fill out the customary certificates in the secretary's office, requesting typhoid vaccination. The vaccine is then obtained from the agricultural department at Topeka. The student is permitted to choose whichever physician he wishes to perform the vaccination. The regular request for treatment must accompany the patient. The charges are accounted under the Hospital Fee Fund."

THEY STUDY AND FARM.

Two Brothers Take Turns Attending the Agricultural College.

The Railsback brothers of Langdon, Kan., take turns going to the agricultural college. W. J. and R. A. Railsback have a farm near Langdon. They are cattle feeders. The work on the farm will not allow both to attend college at the same time, so they alternate, one running the farm while the other goes to college. Both have entered the two years' farmers' short course. W. J. Railsback is in college this term.

A few days ago the Railsback brothers sold four carloads of steers in Kansas City, averaging 1492 pounds apiece. The steers were "top notchers." The price paid was \$7.90 a hundred. That not only was the highest price paid on the market last month, but also the highest price ever paid for steers in January. The steers were fed about 100 days.

FOR A VALENTINE MEAL

THESE IDEAS MAY HELP YOU PLAN A DINNER.

You'll Want Heart-Shaped Things, of Course, so Here's a Menu in Which That Effect May Be Had Easily.

A hostess with originality can give a delightful St. Valentine dinner. The menu can be worked out in a manner suggestive of the occasion. This one may prove of value in planning:

Salpicón of fruit.
Wafers.

Veal birds with tomato sauce.

Macaroni and cheese. Creamed peas in Olives.

heart-shaped crustades.

Coffee. Rolls.

Fruit Salad in heart-shaped gelatin molds.

Sandwiches cut in the shape of hearts.

Ice cream in heart-shapes.

Heart-shaped cakes.

Bonbons in the shape of hearts.

A salpicón of fruit is made by cutting oranges, pineapples and grapes into cubes. It is served with cracked ice in sherbet glasses. To prepare veal birds, the following ingredients are necessary:

2 pounds veal steak cut into strips $\frac{1}{2}$ inches wide,
1 cup bread crumbs,
Salt and pepper.

A dressing is made by moistening the bread crumbs with warm water and seasoning. A teaspoonful of dressing is placed on a strip of veal which has been floured. The veal is wrapped around the dressing and held together by skewers. These are fried slowly in butter and placed in the oven to keep warm while the tomato sauce is prepared for them.

In molding gelatin, if these directions are followed, success may be expected: Wet the molds before pouring in the gelatin. Allow the gelatin to become cold and stiff. Then place the molds in warm water for a few minutes and turn out on the plate.

Sandwiches for the dinner should not be more than one-half an inch thick. They may be spread and then cut with a heart-shaped cooky cutter.

The valentine idea may be carried out in menu cards which may be cut in the shape of hearts. Very pretty ones may be made by decorating square or oblong cards with Cupids sketched in India ink.

The table decorations must be planned according to the shape of the dining room and the position of the table in it. If the table is under the chandelier, ribbons, with varied sizes and colors of hearts dangling from them, may be drawn from the chandelier to the corners of the table. Small Cupids and hearts may decorate the tablecloth if desired.

It is especially appropriate to use flowers on the table at this time. Flowers always have been used to symbolize love. Violets and forget-me-nots seem to be particularly appropriate at valentine time. But there is Burns' "red, red rose" to lead the protest, with daisies, lilies, and poppies, galore, to join in if too much partiality is shown.

UNIFY WORK IN HOUSEKEEPING.

A Committee of Domestic Science Heads Planning a System.

A committee of domestic science educators of the state held a meeting at the college, Saturday, to work out a system for unifying the high school work in domestic science in Kansas. A plan was outlined, but it is not in a form to be made public until investigations are made and the results reported at the next meeting.

The committee was appointed by the State Teachers' Association at its last meeting, and consisted of Dr. Edna Day of the Kansas University, chairman; Mrs. Mull of the State Normal School, and Miss Ula Dow of the Kansas Agricultural College. The committee was here all day Saturday.

THE PICKANINNY'S SWITCH.

The Rev. A. E. Holt Entertains Promoters with a Negro Story.

Two things are necessary in telling a story: First, have the story, and, second, tell it at the proper time. Both these essentials were present, a

few nights ago, when the business men of Manhattan met in the Commercial Club's home on Poyntz avenue to discuss the granting of a franchise for a certain railroad switch. The Rev. A. E. Holt was there, accompanied by several neighbors, all bearing well-developed grousches against the proposed extension, chiefly because it would pass by their doors and, in their opinions, ruin their homes.

"I am against this switch," Doctor Holt said. "And in opposing it I find myself in the position, somewhat, of the little negro boy whose long, kinky curls had caused the school-teacher to urge that he go to the barber. For some days he paid no attention. Then the teacher gave him twenty-five cents, and said, a bit sharply: 'Now get that hair cut.'

"Ah jes' kain't do it," the pickaninny whimpered, "my maw wants a switch, an' she's a growin' it on me."

GET A START WITH BEES.

Early Spring is the Time to Begin Operations.

Many persons would keep bees for the good they would do in fertilizing fruit blossoms, but the general farmer is likely to find it more satisfactory to keep them for their honey. In general, the would-be beekeeper should center his thought on methods of handling that would give the greatest flow of honey. Blossom fertilizing will follow naturally.

Buy a swarm of bees, for \$2 or \$3, from the nearest neighbor who keeps bees. Also order a catalogue of beekeepers' supplies, and an "ABC & XYZ Book of Beekeeping," which costs \$1.50.

Early spring is a good time to begin beekeeping, to get the advantage of increase by swarms. Here is an approximate list of necessities recommended by T. J. Headlee, professor of entomology at the Kansas Agricultural College:

2 supers, $\frac{1}{2}$ by $\frac{1}{2}$.
1 super cover.
3 chaff hives, $\frac{1}{2}$ story.
1 standard smoker.
1 bee-veil.
1 pair of bee-gloves.
250 plain sections, $\frac{1}{2}$ by $\frac{1}{2}$ by $\frac{1}{2}$.
1 pound of medium brood foundation.
2 pounds tin supers foundation.
1 foundation fastener.
1 wax-tube.
1 $\frac{1}{4}$ -pound spool No. 3 tinned wire.
1 swarm catcher.
1 bee-brush.
1 division board feeder.
1 queen drone trap.

CLUBS BOOST MAIN ROADS.

Seven Organizations Are Giving Their Attention to State Highways.

Seven organizations are working in Kansas for better roads. There are many local associations, but the seven referred to seek to better state and national highways. Two organizations have combined their work on the Kansas City to Denver road. Colorado associations complete the Kansas City to Denver road by helping in Colorado. Another organization is remodeling the old Santa Fé Trail, which is an important link in the ocean to ocean road.

A fourth organization, called the Meridian Road Association, is working hard to build a road from the north to the south line of the state. This association derives its name from the fact that its work is on a road along the sixth principal meridian. The remaining three large organizations deal with side lines, which might be called tributaries of the through-state roads. W. S. Gearhart, state highway engineer at the Kansas Agricultural College, is acting as advisor for these organizations.

Gasoline from Natural Gas.

The production of gasoline from natural gas has made rapid strides, and the process is evidently successful when applied to most natural gas from oil wells. An interesting development has been the extraction of oils of low boiling point from wells by attaching a vacuum pump to the well casing and causing the oil to distill out with the gas. It is condensed again at the atmospheric pressure. The gasoline thus obtained is, of course, heavier and more valuable for general use than the lighter products.

BUY UP THE OLD IRON.

IT CAN BE USED TO RE-ENFORCE CONCRETE STRUCTURES.

Cement Posts, Water Tanks, and Pig Troughs Will Be Stronger if Pieces of Old Machinery Are Mixed in When Molded.

Buy up the old iron, sold at the public sales next spring, and use it in reinforcing your concrete structures. Such articles as old buggies, discarded machinery and junk piles usually are sold at the first bid. This material makes good reinforcing for concrete corner posts. Cement posts are becoming popular, and there is a great demand for reinforcing material. Old iron, that would otherwise be an eyesore and a nuisance about the place, can be used to good advantage.

The successful farmer of the future will use much cement. He can make water tanks, pig troughs and similar stationary articles about the farm so they will be everlasting.

A roller can be made of cement for about what the freight would cost on one shipped from the manufacturer. Get a shaft about two inches in diameter and one foot longer than the length of the roller, and build a form of one inch boards, using old wagon tires for hoops. Be sure that the structure is firmly supported in the middle to prevent bulging; old mowing machine wheels which will fit the shaft may be used for reinforcement, and will aid in centering the shaft accurately. Old iron from the junk pile may be used in the reinforcing if there are not enough old wheels at hand. After the form is arranged the adding of cement is a simple matter. A proportion of about one part of cement to three parts of sand is recommended. Crushed rock, or hard cinders, may be used to replace two parts of the sand. After the roller is finished the frame and hitch may be built according to the materials, and the ideas, of the user. The hitch should be placed low so the weight will be removed from the tongue. That will prevent sore necks on the horses.

TUNGSTEN PRODUCTION IN 1911.

Colorado and California Were the Chief Producing States.

There was a sharp falling off in the production of tungsten ores in 1911, owing to the decrease in the market for tool steels, in which the bulk of the tungsten is used. According to preliminary figures collected by Frank L. Hess, of the United States Geological Survey, about 1125 short tons of concentrates carrying 60 per cent tungsten trioxide were produced and shipped during the year, which is less than two-thirds of the output for 1910, when 1821 tons were marketed. The prices for the year ranged from \$4.50 to \$8.50 a unit, depending on quantity, quality, and individual bargaining. At the close of the year \$5 a unit was offered. The unit is twenty pounds of tungsten trioxide to every short ton of ore.

As usual, the Boulder county, Colorado, field gave the largest returns, 740 tons, and the Atolia, Cal., deposits the second largest. Smaller amounts were produced in Arizona, Nevada, Idaho, and Washington.

GROWTH OF COPPER INDUSTRY.

United States Produces More than All the Rest of the World.

The growth of the copper industry in the United States has been notable, according to the figures of the United States Geological Survey. In 1850 the production was 1,456,000 pounds; in 1870 it was 28,225,000 pounds; in 1890 it was 259,763,092 pounds; in 1900 it had increased to 606,117,166 pounds; in 1905 it was 901,907,843 pounds; and in 1909 it passed the billion mark with 1,092,951,624 pounds, decreasing in 1910, however, to 1,080,159,509 pounds. The price has decreased from over 46 cents a pound in Civil War times to an average of 12.7 cents a pound in 1910.

The United States is by far the largest copper producer in the world.

--- Let Me Have Your --- Wasted Hours

Possibly YOU think YOU do not waste any. Just keep tab for four days and you will be surprised. The average man wastes more time in ten years than he would need for getting a college education. Why should any man remain ignorant of the great field of Agricultural Science?

Study at Home

The Kansas Agricultural College offers courses by correspondence in more than TWENTY SUBJECTS relating to AGRICULTURE and HOME ECONOMICS. It employs a Director of Instruction whose business it is to direct the methods of teaching by correspondence and to develop ways of giving instruction to those who are not able to attend College.

Courses Are Offered In--

Elementary Agriculture, Farm Crops, Soils, Stock Feeding, Poultry, Farm Dairying, Butter Making, Fruit Growing, Vegetable Gardening, Floriculture, Landscape Gardening, Drainage, Concrete Construction, Road Making, Elementary Woodwork, Farm Buildings, Cookery, Sewing, Household Management, House Sanitation, Vocational Education, Rural Sociology, Animal Breeding, Forestry, Injurious Insects, and several others.

SEND FOR SPECIAL PAMPHLET. LET ME HAVE YOUR WASTED HOURS.

Director College Extension, Box G.

Kansas State Agricultural College, Manhattan, Kansas

HERE ARE THE BULLETINS.

You Can Get Information on a Great Many Subjects.

Kansas, through its experiment station at the agricultural college, has worked out many problems of value to farmers. The bulletins now available for distribution are:

No. 121. Treatment and Utilization of Flood-damaged Lands.
No. 136. Press Bulletins. 125-151.
No. 137. Variations in the Test of Separator Cream.
No. 138. Effect of Bacteria in Wash-water of Butter.
No. 141. Commercial Seeds of Bromegrass and of English and Kentucky Blue-grasses: Adulterants and Substitutions and their Detection.
No. 143. Disposal of Dairy and Farm Sewage, and Water Supply.
No. 144. Small Grains.
No. 148. Law Regulating the Sale of Commercial Fertilizers.
No. 158. Analysis of Registered Feeding Stuffs.
No. 160. Cow-peas.
No. 163. Hog Cholera and Vaccination.
No. 164. The Selection and Feeding of Laying Hens.
No. 165. Forest Conditions in Central and Western Kansas.
No. 167. A Quantitative Method for the Determination of Hardness in Wheat.
No. 168. The Common Mole.
No. 169. Fertilizers and their Use.
No. 170. Breeding for Type of Kernel in Wheat.
No. 171. Studies on Hog Cholera.
No. 172. The Pocket Gopher.
No. 173. Blind Staggers.
No. 174. Spraying the Apple Orchard.
No. 175. Grasses.
No. 176. How to Grow Wheat in Kansas.

In addition to farm bulletins, the experiment station has issued many circulars. The following are available:

Circular No. 1. Treating Seed-corn to Protect it from Burrowing Animals.
Circular No. 3. Improved Seed Wheat.
Circular No. 4. Prairie-dog Situation.
Circular No. 5. Chinch Bug.
Circular No. 6. Variety Tests.
Circular No. 7. Corn Ear-worm.
Circular No. 8. Investigation of the Vitality of Kansas Seed Corn.
Circular No. 9. Rabies—Hydrophobia.
Circular No. 10. Provisions of the State Forest Law.
Circular No. 11. The Relation of the Size, Weight and Density of Kernel to Germination of Wheat.
Circular No. 12. Treatment of Seed-wheat for Smut.
Circular No. 13. How to Grow Black Walnuts.
Circular No. 14. Contagious Abortion.

At Least 56 Million Barrels in the Kansas-Oklahoma Field.

At least 56 million barrels of oil produced in the Kansas-Oklahoma oil field in 1911 is the estimate of David T. Day, of the United States Geological Survey, against an output of 53,157,386 barrels in 1910.

In the Barnsdell and Sinclair pools, in Osage county, Oklahoma, wells of 1000 to 3000 barrels daily yield were brought in with sufficient frequency during the year to keep the production of the pool in the neighborhood of 20,000 barrels a day, with a gradual decline toward the end of the year.

This new production, with the increase in the Hogshooter and Pawnee county pools, pushed the output beyond the record in 1910, in spite of the great drought in June and July, which was so severe as to drain the drinking supply of several towns and interfere greatly not only with drilling but with manufacturing enterprises. Several times during the year stocks were drawn upon to a slight extent, and increased prices for the oil resulted.

The Coal Production.

The amount of coal mined in the United States in 1910, according to figures of the United States Geological Survey, was greater by 10 million tons than the total tonnage mined up to the close of 1871.